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A FEW DAYS IN CONNECTICUT.

We have recently had the pleasure of spending a few days among the the hills of Connecticut, and returned home more than ever impressed with the poverty of the soil and the wealth of the people.

Riding along the Naugatuck Railroad, and passing field after field of the poorest soil, with here and there a small patch of buckwheat or corn, then acres and acres covered with stones, bushes and the scantiest herbage, we remarked to a lady who sat by us, "this *is* a poor country." "Yes, but it is from such land as this," she replied, "that the Connecticut farmers have brought up large families and sent four or five sons to college."

True, most true, and all honor to them. If the farmers of Western New York were as economical as those of Connecticut they would soon be the richest farmers in the world.

New England farmers have one great advantage—*good prices*. Every little stream and rivulet are made to drive machinery, and there is scarcely a village where a considerable portion of the population is not engaged in some profitable manufacture. Everything the farmers can raise is in demand at prices as high, and in many cases higher, than it will bring in the large cities.

The agricultural necessity of New England is *manure*. The land will produce good crops if it is well manured. Superphosphate, guano, poudrette and fish manure are all used to a considerable extent, but the hungry soil cries out for more. DONALD G. MITCHELL, (Ike Marvel,) of New Haven, whose delightful place, in company with Prof. S. W. JOHNSON, we had the pleasure of visiting, informed us that he had used fish manure with much advantage. He also uses sea weed as a top dressing on his grass lands, and finds it excellent. Muck, when thrown up to dry and composted with manure, or spread in the yards and stable as an absorbent of the liquid, is also used as a top dressing on the meadows, and has a splendid effect. The main point is to get good grass for pasture and for hay. Mr. MITCHELL finds it injurious to pasture his meadows too close in the fall; it injures the next hay crop materially.

SOILING CATTLE.

As we have said, manure is the great object on these poor lands. To obtain this farmers must either purchase artificial fertilizers or keep more stock. With the latter object in view soiling has been resorted to. Mr. H. S. COLLINS, of Collinsville, whose admirably managed farm we had the pleasure of visiting, has for some years practiced soiling and is satisfied that it will pay. He keeps from forty to fifty head of cattle on a farm, which, when he took it, would not support more than a yoke of oxen and one cow.

Mr. COLLINS has tried many crops for soiling, but has finally abandoned all but the following: The earliest feed he can get is irrigated grass. This is ready to cut by the latter part of May. Then comes clover, and by the 1st of July oats and peas, sown together at the rate of four or five bushels per acre. After the oats and peas comes corn and the second crop of clover.

The corn is sown in drills 2½ feet apart. The drills are made with a plow that will make a wide, shallow furrow. The seed is sown in these wide drills at the rate of four bushels per acre. The plants are as thick as they can stand and soon meet in the rows, and thus occupy the whole ground. A more luxuriant mass of vegetation we have never seen. A heavy, smothering crop like this leaves the land very clean. The corn is sown at intervals of two weeks, so as to afford a succession through the season.

The cows were formerly kept in the stables through the summer, but now, Mr. COLLINS allows them to run in the pasture after the morning milking till two or three o'clock in the afternoon, when they are brought in and fed—and kept in the yards or stables till the next morning. At the

time of our visit, (July 31,) they were fed with corn, and the avidity with which they eat it showed that it was "not bad to take."

WINTERING COWS.

Mr. COLLINS provides the village of Collinsville with milk, and it is very desirable to keep a regular supply summer and winter. In the winter the cows are provided with steamed food. Mr. C. has a steam engine which he uses to cut the fodder, grind the grain, saw the wood and for other purposes. The waste steam is used to cook the feed for the cows. Six large hogsheads are used for the purpose. The steamed food consists of two-thirds corn fodder and one-third straw. In addition to this each cow is allowed a bushel of beets or carrots per day and some bran, corn meal or oil cake. The quantity allowed varies according to the amount of milk the cow is giving. A cow in full milk will eat a daily ration of

3 bushels steamed feed, (corn fodder and straw.)
6 quarts bran.
2 pounds of oil cake or cotton seed cake.
1bushel beets or carrots.

AYRSHIRE COWS.

Mr. COLLINS has quite a number of thoroughbred Ayrshire cows, and finds them, of course, excellent milkers. He mentioned one fact as tending to show the tendency of this breed to produce milk. He had some half bred Ayrshire and native two year old heifers in calf, and their udders enlarged so much for some time before they calved that he was obliged to milk them. One of them gave ten quarts of milk per day far some time before calving!

WORKING BULLS.

Bulls are generally a "bill of expense"—eating much and doing nothing. But Mr. COLLINS makes them earn their living. He has two thoroughbred Ayrshire bulls that he has trained to work. He has two carts for them, and regular cart harnesses. The old bull will draw a very heavy load and perform any kind of labor, while the younger one runs on errands to the village, carts green food to the yards, hoes out the corn, and if you want a ride you can jump on his back and he will carry you "with safety and dispatch."

SEEDING DOWN GRASS LAND.

We have rarely seen anything handsomer than the three acres of grass land or lawn that surrounds Mr. COLLINS' house. It was seeded down two years ago in the autumn, having been previously well cultivated, and manured with one hundred and fifty loads of well rotted manure, harrowed in on the surface. Fifty loads of manure to the acre ought to give good grass—and it did.

Mr. COLLINS believes in sowing plenty of grass seed, and of different varieties. He seeded down this land with the following mixture per acre:

4 lbs. Red Top.
8 lbs. Perennial Rye Grass.
7 lbs. White Clover.
4 lbs. June Grass.
4 lbs. Meadow Fescue.
2 lbs. Vernal Grass.
3 lbs. Hard Fescue.
1 lb. Sheep Fescue.
3 lbs. Rough Stalk Meadow.
4 lbs. Rhode Island Bent Grass.

Forty pounds per acre. This is heavy seeding. American farmers make a mistake in not sowing a greater variety of grass seed. For *hay*, Mr. COLLINS sows the following mixture per acre:

9 lbs. Timothy.
9 lbs. Orchard Grass.
3 lbs. Red Clover.
3 lbs. Red Top.
7 lbs. Italian Rye Grass.
3 lbs. Perennial Rye Grass.
2 lbs. Tall Meadow Oat Grass.
4 lbs. White Clover.

This is also forty pounds per acre.

Mr. COLLINS esteems orchard grass very highly. He sows twenty-four pounds of this grass and twelve pounds of red clover per acre. He has cut as much as four tons per acre of hay from this grass.

IRRIGATION.

There is no section of the country so admirably suited to irrigation as the hill sides of Connecticut—and it is a matter of surprise, considering the enterprise which has turned all their streams to such excellent account in manufacturing, that so little use has been made of them to irrigate and enrich the land. The farmers are not as enterprising as the manufacturers. At West Winsted there is a beautiful lake, some miles in extent, on the top of the hill, one hundred and fifty feet above the village. An outlay of a few dollars would conduct this water on to the grass land lying between the lake and the village—and so it is in other places. Now there can be no doubt that irrigation would *double* and *treble* the grass on these lands; and the hay obtained from them would enable the farmer to keep more stock and make more manure, and thus enrich the other portions of the farm.

A CHANCE COMPANION.

We confess to a disinclination to talk much when traveling on the cars. We prefer to look at the country. But at Waterbury we saw a man get on the cars whose appearance indicated that he was a farmer—and one of intelligence. Happening to have a spare seat we invited him to occupy it. We felt convinced he was a man worth talking to; but how to commence the conversation and turn it

to agriculture was the question. We thought of the weather, but that is a hackneyed subject. "A fine day, sir," always sounds flat. A green grocer or a dry goods man might make such an observation. We might talk about the heavy rains which had recently deluged the State and destroyed hundreds of tons of hay. But so might any city man who had been spending a few days in the country. We thought of a remark which Prof. JOHNSON recently made in regard to the continuous wet weather. He said that this season reminded him of the north of England where the hay crop exhausted the soil very little, from the fact that after it was cut "the rain washed back into the soil all the soluable constituents of the hay!" But this was rejected on the ground that it was too chemical. Farmers have not a high opinion of chemists. The high hopes excited a few years ago in regard to the advantages of analyzing the soil and furnishing the missing ingredients have not been realized. If you know anything about chemistry, better keep dark when you are with farmers. By this time a boy came through the cars with water. This afforded the wished for opportunity for the opening remark. "Excellent water you have here, sir, among these hills," we said, as quietly as possible—for it is well known that if you want to talk to a stranger on a journey you must not appear too anxious to begin the conversation. "It is very soft and cool," we continued. "Pretty good water," said he shortly in reply; and then there was an ominous pause. This was not a very flattering commencement, but without further circumlocution we broached an agricultural topic: "I should think sheep would do well in this section. But I understand you have no dog law, and I have seen but one sheep since I have been in the State, and that was a pet lamb belonging to a toll-gate keeper on the road from Collinsville to Winsted."

"Sheep do well here, and there are a good many kept. I have a small flock."

This established the fact that he was a farmer. "How many do you keep?"

"Well, about two hundred and fifty."

"Spanish Merinoes?"

"Yes, Atwoods."

Now, we mentally observed, the man who keeps two hundred and fifty Spanish Merinoes must be quite a farmer, and the man who has "Atwood" sheep must be quite a breeder. We had met with the right kind of companion.

"Do you keep any other kind of stock?" we asked.

"I usually keep from ninety to one hundred head of cattle."

"What breed?"

"Natives and Devons. I have tried Ayrshires, and have now some Alderneys."

"The latter give very rich milk, but not much of it," we remarked inquiringly.

"I do not know about that. It is certainly very rich, and I think they will produce as much butter for the food consumed as any other breed—perhaps more."

"Do you soil your cattle?"

"No, it won't pay."

"Mr. COLLINS thinks it will pay, and he keeps very accurate accounts."

"You can keep more stock on a given quantity of land, and if you can attend to it yourself, or have two or three boys that like to attend to such things it will pay; but if you have to hire Irishmen and watch them, it is more trouble than profit. The same is true of steaming food. I got PRINDLE'S steaming apparatus and tried it last winter, but it involves too much labor."

Our friend left us at Bridgeport, and in a short time we arrived in the great commercial metropolis. Almost without stopping, the engine is taken from the train, and four splendid horses are attached to each car to draw us into the city. We pity a horse that has been brought up on a quiet farm, and afterwards sold to some city dealer. Many of the car and omnibus horses are splendid animals, but these hard pavements must soon use them up. Yesterday over fifty horses died in the city from the heat. We saw one lying dead in the street as we passed.

We had a pleasant call on Prof. THURBER and Mr. JUDD, of the *Agriculturist*, but New York has few attractions to us at any time, and certainly not with the thermometer at 98° in the shade. We left for home on the first train on the Erie road, and in a few hours were twisting round the mountains and along the cool banks of the Delaware and Susquehanna. Morning found us at Corning, and in a few minutes we were speeding along the Genesee Valley Railroad and through the finest agricultural section of the State. The recent rains have done great damage to the oat crop. We saw one field that looked as if it had been submerged, and the oats were rotting on the ground. Here and there a field of wheat was still uncut, and it was really pleasant to look at them! New England has much to be proud of, and it is a pleasant place to visit, but for a permanent home give us the Genesee Country!

THE ATTRACTIONS OF AGRICULTURE.

We believe all men have a natural and inherent love for agriculture. It may be perverted by ambition or the thirst for wealth and power, or smothered by love of ease and luxury; but in the majority of cases, it still exists, and the nobler and more elevated the man, the stronger is this love for the quiet and peaceable pursuits of the farm. See that prominent lawer, working from day to day, and year after year, over dusty briefs, and ask him what he labors so hard for. He may answer, "For the good of my client:" but could you read his heart you would find that he intends some day, when rich enough, to buy a farm—perhaps the very one on which he was born—and spend the remaining years of his life amid the pleasures and pursuits of the country.

A few days since we saw one of the ablest lawyers of Western New York, on the farm to which he has retired, *digging an underdrain!*

"Every farmer may not become a President, but it is a fact that every President becomes a farmer." Gov. Seymour, in a recent agricultural address, says he has taken pains to inquire, and believes this saying is true.

"The late Ambrose Spencer," he said, "had wielded more political power in the State of New York than any man who lived within its limits. For twenty years that man was almost despotic. His huge frame, strongly marked features, and indomitable will, corresponded with his position. At the time to which I allude, his influence and power had passed away. He was an old man, in the decay of life. I asked him what interest he then felt—in what he employed his mind? I was anxious to know what could occupy the mind of a man whose career had been so stormy, so vigorous, so important, so valuable as his own. He said he was entirely engrossed with his farming pursuits, and that he witnessed the processes of nature which they unfolded with the liveliest pleasure.

"I saw Chancellor Kent, then at the age of 80, almost at the same period. He was a mild, studious and intellectual man, prominent as the other, but of very different type. Both of these old men I found, at the close of life, engaged in the same pursuits, and full of zeal and pleasure in argicultural occupations at an age when some farmers are tired of them. These men had cultivated their minds, and they looked on farming pursuits intelligently.

"Every wise man will lay up provision for his old age—not alone in wealth which may be all idle and useless to him. Let us lay up, not only that preparation for another world which every man should make, but that which grows out of a cultivated mind. Taste outlives the intellect. I have in my mind at this moment one of the most beautiful and touching illustrations of that fact that could well be presented: My own mother, when her intellect was gone, and her mind all ajar and astray, preserved all the love of nature which she had acquired in the morning of her existence. Next door to us lived a young man, stricken down and rendered helpless by disease. Often have I looked out into the adjoining gardens, and seen the old woman, my mother, in the last stages of life, making herself happy with a taste that had outlived her intellect; and also the young man, stricken down in his strength, happy and cheerful, because at the right time he had cultivated his taste, and had the unfailing resource of agricultural occupation."

MISTAKES IN JUDGING LAND.

Gov. Seymour, in his address before the Vienna Agricultural Society, related some interesting facts in regard to the mistaken mode of judging the quality of land. He said:

"Some years ago, the most intelligent man, in some respects, that our county ever produced—the late Henry Huntington, of Rome, whom the older portion of you will remember for his great ability and general good sense—was employed to visit Western New York—the district embracing Rochester, Buffalo, and Geneva—and report whether it was worth while to buy it at some very low price, 50 cents an acre, I believe. He went over that region of country. He had not the opportunity which we have now, of judging of the fertility of the soil from the geological indications of the country. He went all over the tract and returned and reported that the whole of it was so low and swampy as to be valueless, and dissuaded the company from the purchase. Yet we now know that a more valuable and productive country does not exist.

"We had men who desired to become owners of large landed possessions, and made the first selections, with all the continent before them. What was the choice these men made; men of sagacity, who had been successful beyond measure in their business pursuits? These men bought the wilds and wilderness of John Brown's tract, which to-day is as wild as it was a hundred years ago. I do not mention this to reproach the men of the past, but to instil a useful lesson for ourselves. These men saw that that region was geographically nearer to the markets, that it was covered with vast forests, and showed all the signs of a good soil.

"And here let me say a word in regard to 'the signs of a good soil.' I have observed that every man looks for the signs which he has been accustomed to in the locality he came from. Thus, if a man comes from a country where pines grow on barren soil, he will conclude that the soil is barren where pines grow. At an early day our farmers were prone to be governed by these signs in coming to a new country. The men who bought John Brown's Tract, paid out for their land sums of money—which the accumulated interest until now would swell to something fabulous. John Brown himself was a very intelligent man; was the founder of Brown University, in the State of Rhode Island, and possessed the highest skill in business matters. He afterwards sold this land for a nominal sum—two shillings. I believe—per acre. On making the

computation of what it had cost him, he found that it amounted, with interest, to more than a million of dollars. I cite this case to show how mistaken intelligent men have been as to the signs of good land.

"If any of you have been in the county of Lewis, passing north from Utica, you will see land which is among the richest and most beautiful to be found anywhere, dotted with farm houses, displaying every evidence of prosperity and luxury on the part of the owners. The Lewis county farmers have some of the best farms in the State, and always carry off prizes at the State agricultural fairs. As you travel along the course of the Black river, you can stand on land which for many years has sold at from $30 to $40 and $50 an acre, and throw a stone across the river on to land that is never worth over $5 per acre. Yet the latter was first settled. The first settlers chose the east side of the river because it was nearest to the market. Those who settled on the west side did so because they had no option. The men who bought land on the east side lost their money; those on the other side were able to transmit large fortunes to their posterity. If these men had known then what any man can learn now by one day's attention to geology, they might have foreseen this result exactly. The Black river runs for 60 or 70 miles along a valley made by the overlapping of one stratum of rock over another. On the one side it is an igneous rock which disintegrates into sand—making a poor, aried soil. On the other side of the Black river the subsoil is limestone—which makes a warm, rich, productive soil. That general knowledge of geology, which all men can now acquire without burdening themselves with abtruse learning, or diverting themselves from their business pursuits, would have saved the one class of settlers from poverty and made them rich men."

GOVERNMENT HORSES.—A great many of the horses lately disposed of by the Government as "condemned," &c., were, and still are, subjects of various forms of skin disease—mange, lousiness, &c, and it is probable that when such animals are introduced into decent "horse society," they will be the means of spreading the itch, mange, lousiness, &c. Hence, I propose to give the readers of this work some advice on the subject:

In the first place, almost all the skin diseases prevalent among army horses owe their origin to neglect and filth. Hence cleanliness—brush and curry comb—are the best means of prevention, and are also valuable as curative agents.

The best local application for diseases of the above character, is as follows; Linseed oil, tincture of lobelia, pyroligneous acid, spirits of turpentine, equal parts. Mix.

Apply, by means of a sponge, a portion of the above mixture to all parts of the body; and the patient should have an occasional dose of sulphur in a bran-mash. Four drachms of sulphur constitute a dose.

A HALF-BLOOD Alderney heifer belonging to CYRUS KNIGHT, of East Hartford, Conn., gave birth to a calf when one year and twenty-four days old. Mother and calf are as well as could be expected.

THE PROPER DEPTH OF UNDERDRAINING.

SANFORD HOWARD, Esq., of the Boston *Cultivator*, who has spent much time among the best farmers of England, alludes to a remark in the London *Farmers' Magazine* in regard to the "dogmatism of drainage" among some English writers on the subject, and remarks that we, on this side of the Atlantic, are not strangers to this same kind of dogmatism. It has been asserted here, as in England, that a drain should always be at least four feet deep. "The attention of these dogmatists," says Mr. HOWARD, "has been called to the fact that on certain lands in this country, drains of two and a half to three feet deep have doubled the crop of wheat, raising it from fifteen to thirty bushels per acre, on the average, for several years; and in reference to this fact the question has been asked whether there was any evidence that in these cases the benefit would have been greater from deeper drains, or whether the increased benefit from four-feet drains would have compensated for the increased expense. No responses were made to these questions, but the persons to whom they were addressed go on with their dictation without even alluding to the demonstrated benefits of drains of less depth than their creed recognizes.

"Occasionally the attempt has been made to show that four-feet drains are not really any more expensive than those of two and a half feet, because, it was asserted, the spaces between the drains could be doubled. The defenders of this assumption were told that experience had clearly proved that in stiff clay soils this rule was fallacious; that the deep drains would not sufficiently draw the water through the wider spaces. This fact seems now to be generally admitted by British teachers, though some of their American pupils have not yet found it out."

Mr. HOWARD cites several instances to prove that the four-foot rule is not applicable to all cases.

We do not know how it is about Boston, but in this section farmers do not need to be cautioned against putting their drains too deep. They are much more inclined to run to the opposite extreme. We have seen many tiles laid not more than 20 inches deep, and of course the farmer did not receive half the benefit he would if they had been 2½ to 3 feet deep.

JOHN JOHNSTON says:

"If parcticable, drains should go so deep that the water comes in at the sides, instead of rising

from the bottom of the ditch, and this I have found to be the case at from 2½ to 3 feet deep, on my farm. After going deep enough to protect the tile—and 2½ feet is ample for that—I can see no reason for getting down eighteen inches into the hard-pan or stiff clay, wherein there is no water, neither do I think any man can show a good reason for so doing."

TOP-DRESSING WHEAT, &c.

In 1858 we visited the farm of John Johnston, near Geneva, N. Y., in company with Mr. H. E. Hooker, of this city. Mr. Johnston pointed out to us the effect of a dressing of salt on his wheat. He had a field of twenty-five acres. On fourteen acres of it he sowed on the fallow, just before seeding, one barrel of salt, (280 lbs.) to the acre. The salted wheat was much the best; the straw heavier, brighter and stiffer, and the heads larger. *It was also at least five days earlier*, and the midge had, consequently, done little or no damage; while on the adjoining eleven acres the midge had injured it materially.

Mr. Johnston also pointed out strips of wheat where the land had been manured, and the same effect was also distinctly visible.

A few days since, Mr. Hooker was in our office and remarked: "I learned a good deal from that visit to John Johnston, that has been of use to me. I have top-dressed my wheat several times since then, and always with great benefit. I have observed the same thing among my neighbors.

"I have a piece," he continued, "part of which I top-dressed last fall, with well-rotted dung. The wheat on this part is at least *a week earlier* and will yield as much again as the other portions of the field. It will yield thirty bushels per acre, while I think the other will not go over fifteen bushels."

"How did you apply the manure?" we asked.

"I spread it on the fallow and harrowed it in. I then sowed the seed and harrowed it again and rolled it."

"I know another case where the manure and seed were all plowed in together, and the wheat is excellent."

"With a gang plow, I suppose?"

"No, the farmer had no gang plow, or that would have done the work more expeditiously. The piece was a summer fallow, broken up the last of June, and cross plowed very shallow, so as not to turn up the sod, in August. The manure was then spread on the surface and seed and all turned under with the plow as shallow as possible—not more than two inches deep, or at the most, three inches."

"The manure seems to act as a kind of mulch. The wheat gets a good start and winters well. The roots seem to spread out more near the surface and it does not send out a tap root. The freezing and thawing does not injure it. The whole mass of roots heaves up and down with the soil and receives no injury. If it had tap roots they would be broken off, and the plant weakened or killed."

"I have always believed," we remarked, "that wheat would be very grateful for a little manure. But John Johnston does not manure his wheat in that way. He applies it on the grass land the fall before he breaks it up for wheat. At least, this, I believe, is his usual plan. The farmers in Wheatland are adopting the same system with good results."

"There is one thing," continued Mr. Hooker, "I want to tell you. I had a fine piece of land that I planted to potatoes and the next spring sowed it with oats, seeding it down with clover and timothy. The next year I mowed the clover. It was a fair crop — principally clover. It so happened that I could not pasture it, and so let the second crop of clover rot on the land. The next year I had an excellent crop of hay—more timothy than the year before. The second crop I let grow and rot on the land as before, and the next year I had still heavier grass. I let the second crop rot on the land as before, and this season it is the heaviest crop of grass I ever had."

"Is it nearly all timothy?"

"No, there is a good deal of clover in it. The fact is, the second crop produces a good deal of seed, and I suppose reseeded the land. I have no doubt that had I pastured the land in the fall in the usual way I should not by this time have had more than half a tun of hay per acre, as the land is very poor."

The London *Agricultural Gazette*, in a notice of some small prizes awarded to fine animals, contrasts these awards with the vastly greater prizes of commercial success; and to show the latter, gives the results of the sale of Mr. Jonas Webb's cattle and sheep, which make a total of $125,000 worth of stock on a farm of 800 acres.

Value of the Hay Crop.—We see it stated that two gentlemen of Bucks Co., Pa., have taken pains to estimate the value of the hay crop in that county, and find that it is worth not less than *six millions of dollars!* Few farmers sufficiently appreciate the hay crop as a source of wealth.

POTATOES.

The following extracts from Mr. John Townley's pamphlet on the *Potato Disease*, though written fifteen years ago, will be read with much interest at the present time:

RAISING POTATOES FOR SEED.

"Potatoes should be grown specially for sets, in order that we may have the most healthy and vigorous plants which the variety cultivated is capable of affording. A somewhat open, airy situation should be selected for the seed-bed. If the land is springy or not well-drained, adopt the lazy-bed method of planting. If the land has been manured for the previous crop, and is in good condition, plant without manure; but if the land is not in good heart, then apply, broadcast, in preference to all other manures, partially decayed leaves, or where this is not to be had, use charcoal dust, or charred peat, or a slight dressing of guano; the object being to promote a steady, healthy and vigorous, but not over-luxuriant growth. Plant the tubers *whole*, not less than six inches deep, about eight inches from each other in the rows, and let the rows be about two feet apart. The same distance between the rows is of course not suitable for all varieties—this must be regulated by the planter's knowledge of the habits of the varieties he cultivates. The point he should aim at is, to have the whole of the ground covered by foliage during the bright days of summer, but so that the plants of one row shall not interfere with or shade those of another. Plants grown for seed must never be suffered to blossom. If a plant produces many blossoms and seeds, it will be at the expense of the tubers; that is, the sap which would be expended in support of the flowers and fruit, would contribute to the growth of the tubers if the flowers were destroyed. But this is not my reason for recommending this practice with plants grown specially for sets. Many facts observed in various kinds of plants, lead me to suspect that the production of seeds has a peculiarly exhausting effect on vitality, and I am much inclined to believe that if ever the experiment is tried, it will be found that a variety of potato which bears seeds abundantly, will maintain its health and vigor for a much longer period if the blossoms are annually destroyed, than if it is permitted to ripen its seeds each year."

PLANTING THE MAIN CROP OF POTATOES.

"The next inquiry is, when and how the main crop should be planted—what soils, situations and modes of culture are best calculated to mitigate the effects of the disease? In 1845 it was generally observed that potatoes grown on peaty or moss soils were much less injured than in any other kind of land. In the last season the difference may not have been so decided, still the reports generally are much in favor of peaty soils, and considering the high price of comparatively good potatoes, the occupiers of such lands will probably be induced to plant them extensively. Clays and heavy wet loams are known to be least favorable to the growth of the potato, and in these soils the disease appears to have been most virulent. But the evidence respecting all soils is very contradictory, and the difference in the results observed was probably owing, in many instances, to a difference in situation, &c., rather than to any peculiar property of the soil.

"That a given variety of the potato may suffer more from the blight in one situation than in another, is what might have been expected from the facts previously stated in proof of the conditions which favor the growth and increase of parasitic fungi. Many have observed that the disease was first developed, or has been most destructive, when the potatoes were growing under precisely the same circumstances which predisposed wheat plants to an attack of mildew.

"Thus we read, 'the disease has been worst on damp, low-laying soils, although well drained, where the air could not circulate freely, by the place being surrounded by trees or high hedges.' 'I have uniformly found that where the circulation of air is least, there the disease has been most severely felt.' 'Most farmers agree that the disease was most powerful in wet and confined situations. Facts, however, incline me to attribute the prevalence of the disease in such situations to their confined, rather than to their wet, character.' Then again respecting the influence of an excess of manure: 'The disease has appeared most where the land was naturally rich, or highly manured, and in low situations.' 'The disease was most obvious at first on the sites of dunghills.' 'Those portions of the field on which the dung-heaps had been laid were very much affected.' It is indeed a very general observation, that those crops which had an over-luxuriant growth of stems—the result chiefly of high manuring—were most diseased. Next to peaty soils, light loams in rather elevated or open situations, should therefore be selected for the potato crop, and much less than the usual quantity of manure should be applied—if it would not be much more advisable to manure the previous crop instead, where practicable. It is probable that the disease may be influenced to some extent by the nature of the manure. Gross animal manures, when applied in a considerable quantity, are well known to produce in plants a tendency to decay. On the other hand, partially decayed leaves, or charred vegetable matter, are highly favorable to healthy vegetation. Thus, on recently cleared woodlands, or on newly-broken up grass land, potato crops are generally abundant and of good quality. Since the publication, in *Liebig's Agricultural Chemistry*, of Lucas's experiments on the growth of plants in charcoal, it has been extensively used in this country, and with considerable benefit in the culture of green-house plants. The interesting tribe of Orchids flourish on charred blocks of wood; and Mr. Rivers, in his experience of the pot-culture of the rose, finds that charred grassy tuft adds greatly to the health and free flowering of his plants. Wherever such materials as these can be abundantly and cheaply obtained, there is little doubt they would contribute to the health of the potato, and thereby tend to mitigate the effects of the disease.

"We may, also, by other means contribute to the health of the plants, and promote a freer circulation of air among them. I observed in the last season that, in very many instances, potatoes were grown in rows much too near each other. The

season was peculiar. During the drought in the early part of summer, the growth of the plants was slow, and much of the ground remained uncovered with foliage, and, therefore, exposed to the sun. A great amount of heat necessarily accumulated in the soil. When rain fell, the temperature continued high; and the combined influence of the warmth and moisture of the soil and air had a forcing effect on the potato plant, and caused the haulm to grow with excessive luxuriance, so that the foliage of the plants of one row soon interfered with that of another. Whenever this happens, the plants, instead of quietly attending to the formation of tubers, become engaged in a struggle with each other, fighting, as it were, for the precious light. The invariable result is, that all are more or less injured; the stems are drawn up, the sap has further to travel in its ascent and descent; many of the lower leaves become shaded and therefore useless; the stems are also more brittle and liable to be laid, and the produce of plants so situated, whether they be potatoes or forest trees, will invariably be found deficient, as compared with crops grown at a proper distance apart.

"This induced me to suggest to the Agricultural Society last autumn, whether there might not be some advantage gained by intermixing potatoes with other crops, instead of planting them in fields or plots by themselves as heretofore. In a cottage garden, for instance, carrots, turnips, parsneps, lettuce, onions, &c., might be grown in alternate rows with potatoes: my object being to have an intermediate row of some plant having a different habit of growth. The haulm of the potato would then be shorter and firmer, and the whole of the foliage could be exposed to the light, so that no sap would be expended in useless machinery, but all would be reproductive; and if, in addition, the potatoes are planted early in March, so that they may commence their growth with the first impulse of spring, they will obviously be in a position to make the most of the time they are suffered to grow, and, owing to a free circulation of air round the plants, and to the better health they may be expected to possess, they will, probably, offer greater resistance to the parasite than if grown in the usual way. 'A vigorous but not over-luxuriant plant, and a stirring atmosphere, being,' as Dr LINDLEY truly observes, 'the greatest enemies to mildew.'

"Instead of this practice, some will be inclined to plant their potatoes wider apart than usual. The same object would certainly be attained; but in most cases, and in ordinary seasons, I think it would be at a needless expense of land, and, therefore, less profitable. Besides, by adopting this mixed mode of culture, the weeds of the blighted potato fields of last season seem to assure us of this consolation, that if the potatoes are again blighted, the crops grown alternately with them will be benefited by their destruction. They will obviously have a more extensive pasture for their roots, and a greater share of light for their leaves; and if the decaying stems and leaves of the potato plants are not immediately removed, as was generally the case last season, they will furnish an extra supply of manure to the remaining crops, and the extra growth of these would, to some extent, compensate for the deficiency of the potatoes."

RAISING NEW VARIETIES.

"These, however, are merely expedients to be resorted to with a view to bolster up for a few years the present degenerate varieties; and now I propose to consider how we should proceed in raising a succession of progressively hardier varieties from seeds, with a view to regenerate the potato in the shortest time and in the most effectual manner.

"Those who are desirous to assist in this work, but who have not now set any plants apart with a view to grow them especially for seeds, may select a few growing at the south end of the rows of their ordinary crops. Secure these plants to stakes, and compel them to blossom freely, and perfect the seeds by the means hereafter mentioned.

"Whenever potato seed is required, plants should invariably be grown especially for that purpose. I should, in the first place, obtain a few middle-sized tubers, say about four, of the most healthy and hardy varieties for the seed-bearing plants; and, as the autumn months are generally more favorable to the attack of parasitic fungi than midsummer, early and second early varieties should be preferred; because, unless we had a late variety, which had been proved to be able to resist the disease, the chances would be greater of the plants being destroyed before they had perfected their seeds, than if early or second early varieties only were used. The plants must be grown from the first in the open ground, in a situation sheltered from strong winds, yet not confined or damp, but freely exposed to the sun. Enrich the soil with decayed leaves, or chopped grassy turf; on no consideration whatever apply liquid manure, or a heavy dressing of animal manure.

"In favorable seasons most late varieties will produce a crop of berries as well as tubers. Intermediate varieties generally blossom, and sometimes bear a few berries; but the earliest sorts, owing to the early formation of tubers, seldom blossom, and very rarely ripen seeds. These will obviously require different treatment. In order to obtain seeds from the early varieties, we must adopt the practice of Mr. KNIGHT, who found that if the plants are prevented from forming tubers an abundance of blossoms and seeds will be the result.

"Having made choice of a situation, and manured the soil according to the foregoing directions, fix strong stakes in the ground about three feet apart, where each plant is to grow, then place a tuber on the surface of the newly-dug soil, and in contact with the south side of a stake, and cover the tuber by a mound of earth about five inches deep. Suffer only one stem to grow, and as it advances in growth tie it to the stake to avoid accidents from the wind, &c. When the plant is about five inches high, wash away the mound of soil by a strong current of water, till the base of the stem is visible. The fibrous roots by which the plant is nourished will have made their way into the enriched soil below the tuber; these must be disturbed as little as possible. They may be readily distinguished from the runners which generate tubers, every one of which must be destroyed. The plant will shortly make an effort to produce other runners, which must again be nipped off as soon as they are perceived; and the plant being

thus foiled in its endeavors to propagate itself in this manner, will ultimately direct its energies to the production of blossoms and seeds.

"I consider it advisable to fertilize the flowers of one variety with the pollen of another. Some facts seem to indicate that a result of this practice is a more vigorous seedling than could have been obtained from either of the parent plants without the crossing. Some who may be desirous of trying this method, may not know much about the sexual organs of plants. To such the following instructions may be of use:

"Take a full-blown potato flower; in the inside of it you will find six small upright bodies, five of which are alike; these are the stamens, or male organs, which produce the yellow fertilizing dust called pollen. In the center of the flower, and surrounded by the five stamens, is the pistil or female organ; this may be known by its light green color, and by its differing in shape from the stamens, or, by carefully tearing away the corolla or flower leaf, and the stamens, the pistil may be still further distinguished by its being seated upon the miniature berry containing the embryo seeds.

"To cross fertilize it is of course requisite that the parent plants should be in blossom at the same time. A flower intended for the female parent, should not be suffered to perfect its pollen; to prevent this, it must be carefully opened just before it naturally expands, and the five stamens must be removed by a pair of small-pointed scissors, taking great care to leave the pistil uninjured. When the flower has expanded, gather perfect flowers of the variety intended for the male parent, and dust the pollen onto the pistil of the flower you have previously deprived of stamens, or shake the pollen onto a sheet of writing-paper, and so scatter it onto the summit of the pistil. The best time for this operation is in the middle of a dry sunny day, and to avoid failure it should be repeated every favorable day till the flowers begin to fade; the petals of flowers having been observed to shrivel and fall, soon after the seeds were fertilized, and to retain their petals for days longer if this had not taken place.

"When about four berries are set on each plant, nip off the remainder of the flowers. At this stage of growth the plant will have completed its feeding organs, and a greater quantity of sap will probably be elaborated than is required for the support of the seeds; consequently, one or two tubers may now be suffered to grow, or the plant will form them in the axils of the leaves higher up the stem. If the parasite should appear on the leaves of the seed-bearing plants, as soon as the spots are perceived dust them with the flowers of sulphur on the under side of the leaves when moist. This may possible destroy the fungus, or otherwise stop its progress.

"A Silesian agriculturist, who has succeeded in regenerating the potato by means of seedlings, takes the seeds from the berries in autumn. ZANDER, who has been equally successful, objects to this practice, and advises that the seeds should be preserved in the berries in a dry place secure from frost, till the beginning of February. It may be well to ascertain for the sake of future guidance, whether these different modes of preserving the seed exercise any influence on the vigor of the young plants. ZANDER's plan may prove the best, especially if the seeds were not thoroughly ripe when the berries were gathered. When the seeds are to be extracted, crush the berries with the hand, and put them in a tub or other vessel; place them in a cellar, or some other shady place, for six or eight days; as soon as a slight fermentation is observed, wash the pulp in luke-warm water; pick out the seeds, and wash them gently in one or two other waters, till they are perfectly clean and free from pulp; then scatter them on a sheet of paper to dry; when dry, place them loosely in small canvas-bags; suspend the bags in a bed-room, or some equally temperately-dry place, until the time of sowing.

"About the last week of April prepare a piece of free soil for the seed-bed; the previous year's onion-bed, or some plot equally well manured, and which has grown a crop equally different from the potato the preceding year, should be preferred. Sow the seed thinly and shallow, in rows six inches apart; when the plants are four or five inches high, prepare the ground into which they are to be transplanted; apply a moderate dressing of guano, or charred vegetable matter, broadcast. If the ground is boed into ridges, that is, if it is formed into a wavelike surface (as is sometimes done for cabbages,) and the seedlings are planted in the hollows, they would, to a certain extent, be protected from the wind; they might be watered with greater facility if the weather should prove dry, soon after planting, and roots would ultimately be deeper in the soil than if planted on the level surface; these advantages would more than compensate for the extra trouble. Remove the plants carefully, disturb the roots as little as possible, and select a dull moist day for transplanting. Let the rows be not less than twenty inches apart, and the plants eight inches from each other in the rows. To save after trouble, reject all plants which exhibit marked symptoms of constitutional weakness, and all which have soft prostrate stems. Carefully observe the remaining plants throughout their growth, in order that the healthiest and the best may be selected to be the parents of the seed-bearing plants in the following year. Those which exhibit the greatest hardiness, which suffer the least from adverse weather, &c., must be marked by labels; and if, in addition to this indispensable property, any possess other good points, such as dwarf, stout, rigid stems, good-shaped tubers, and ripen somewhat early, a preference should be given to them. The Silesian agriculturist says: 'A condition, *sine qua non*, is, that the tubers of the seedling plants be carefully preserved during the winter from becoming heated and sprouted before they are planted.' It may be well, therefore, to leave the tubers undug until the time of planting, and as they will probably be formed nearer the surface of the soil than the tubers of plants grown from sets, a covering of two or three inches thick of brackens, heath, furze, straw, or some such material, may be needed to preserve them from frost.

"When the time for planting has again arrived, and the ground been prepared, and the stakes fixed where the seed-bearing plants are to grow, dig up the tubers of one of the marked seedlings, select two or three of the largest and plant them at once; then raise the tubers of another of the chosen

plants, select and plant as before, and so proceed till the allotted space is occupied. Manage these seed-bearing plants in all respects the same as those of the preceding year. Preserve and sow the seeds, and attend to the young plants as before. Mark, again, the most perfect and healthy, whose tubers are to furnish the seed-bearing plants of the following year; and when, by persevering in this process, the main object is attained—hardiness of constitution and freedom from disease—we may then more especially endeavor to obtain varieties uniting excellence of quality, and other desirable properties, with robust health. A careful and practiced experimenter will indeed have an eye to this from the beginning. He will, at the outset, consider the various points which constitute perfection in the potato, and to this ideal standard he will constantly aim. He will observe the habits of his select plants, what is the length and strength of their stems, whether the foliage is ample or scanty, if the leaves are smooth and polished, or wrinkled and rugged, what is the period of ripening, and what the quantity, quality and shape of the tubers. He will then be in a position to aim each year with some degree of certainty at perfection, by crossing his plants, with a view that the defects of one parent shall counteract the defects of the other; I mean, he will let one be too full where the other is deficient, so that if he could take from some of the points of one parent, and add this to the same points of the other parent, a more perfect plant would be obtained than either.

"Some seedlings may be raised in the first or second year possessing a considerable degree of health, and yielding tubers of good quality. It would, of course, be advisable to try such a second year, with a view to supersede some of the more worthless of the varieties now in use, but to be grown only until more perfect and hardy varieties can be obtained.

"These seem to me the most likely means for the speedy restoration of the potato to a healthy condition.

"If any who desire to raise plants from seeds consider the above too troublesome a process, or have doubts of succeeding in cross-breeding, &c., let them plant a few tubers of a second early variety, deprive the plants at an early stage of growth of some of their tubers, taking special care to limit the number of berries to three or four on each plant.

"It is generally known that seeds of the apple, gooseberry, potato, &c., afford plants differing widely from their parents and from each other; but it is a question whether this is owing to a propensity of these plants, (which have been much altered from the normal condition of the species,) to sport into varieties, or whether it is due to the action of adventitious pollen conveyed by the wind or insects. Baron HEPBURN, in a communication to the Board of Agriculture, stated that 'he had repeatedly renewed the seed of a favorite kidney potato from the apple, and as no other potatoes in flower were growing near them, the return was pure. One year, however, he planted them in a field with other varieties, to try that mode of renovation, and the crop was mostly hybribs.' I have met with two or three observations to the same effect. It is highly desirable that this should be satisfactorily determined by experiment, because if the observation is really well founded, then when once we have obtained a variety possessing a combination of good properties, it would be an easy matter, by adopting certain precautions, to continue it to an indefinite period, by occasionally renewing it from seed. We may also then anticipate, with a considerable degree of certainty, what will be the character of our seedlings in cross-breeding.

"They who possess a *cool* green-house, and who know how to manage plants under glass so as to cause healthy and vigorous, yet short-jointed stems, would probably find some advantage by forwarding their plants in pots, to be afterwards plunged in the open border, when danger from frost had passed. By this means seeds of early varieties might be ripened during the generally dry and sunny weather of June; they would also blossom before the ordinary crops of the garden, consequently it would be the experimenter's own fault if any adventitious pollen interferred with his experiments. If, however, the temperature of the green-house is suffered to become so high as to *force* the plants, this practice can not be recommended, and on no account should the seeds be ripened in artificial heat.

"Sir JOSEPH PAXTON says: 'Seeds ripened or germinated in heat will never produce such hardy plants as those matured and vegetated in the open air. This has been abundantly corroborated in practice, and proofs of its accuracy are constantly transpiring.'"

CUTTING OFF THE FLOWERS OF POTATOES.

"Mr. KNIGHT advised that the flowers of potato plants should be plucked off, and he was very desirous to obtain varieties which, owing to some malformation of the floral organs, or peculiarity of habit, did not naturally blossom; because the production of blossoms and seeds must tend to diminish the weight of tubers, or they must be formed by an increased expenditure of the riches of the soil.

"If a Dutch florist wishes to propagate a hyacinth, he adopts means to prevent its flowering, and a progeny of young bulbs is the consequence. If a tulip-grower has a bulb which grows too strong, producing seven or eight petals instead of six, in order to tame it he allows it to ripen its seeds. An onion forms its bulb one year, blossoms and seeds the next, and so dies; but persist in not suffering the plant to blossom, and the formation of other bulbs will be the result. The sap which these plants would have naturally employed in the formation of seeds, is thus made to contribute to the growth of bulbs. By depriving the potato plant of its tubers we cause it to blossom and seed abundantly; obviously the same sap gives existence alike to tubers and seeds; therefore, by preventing the growth of flowers and seeds, we must add to the growth of tubers.

"Many experiments have been made, from time to time, with a view to determine whether any and what benefit is to be derived from plucking off the blossoms of the potato plants, and very different results have been arrived at—some maintaining that they have proved experimentally that it is highly beneficial to remove the flowers; others with equal confidence refer to their experiments, and contend that no advantage whatever is to be gained from the practice. Both may be perfectly

right as to the result of their experiments. The difference of opinion, I conceive, arises from not taking into account the influence of certain circumstances, which must interfere with or vary the results. The benefit or otherwise of plucking off the flowers, will depend partly upon the habits of the variety of potato, partly upon the quality of the soil, and partly upon the nature of the season. The greater the number of berries which a variety naturally produces, the greater will be the gain of removing the flower-buds. Second early varieties seldom produce many seeds, consequently little or no advantage could be gained by removing the flowers of these, as compared with late varieties, which generally bear seeds abundantly. The quantity of berries produced by a given late variety will also depend upon the quality of the soil. The better and more suitable the soil may be, the greater will be the health and productiveness of a plant. The productive powers of a plant also depend on the nature of the season. If the weather of June and July should be warm and bright, with frequent showers, we may observe that even intermediate varieties are enabled to elaborate a quantity of sap equal to the wants of tubers and seeds, and in such a season the crop of berries of a late variety would be most abundant. The greatest amount of benefit to be derived from plucking off the blossoms, will therefore obviously be from a late variety, growing in a soil and season favorable to the potato.

"Much also depends on the degree of care observed in nipping off the blossoms. The plants are nearly full grown when they flower, and if many stems are broken or laid by the children employed, this must tend to neutralize the benefit of destroying the flowers.

"In the Highland Society's Transactions it is said that the difference in favor of plucking off the blossoms as soon as they appear, instead of allowing them to remain, was nearly one-sixth of the crop. This may be considered an extreme case; but from a late variety favorably situated, we may safely calculate on a gain of tubers of not less than one tun per acre."

RAISING EARLY POTATOES.

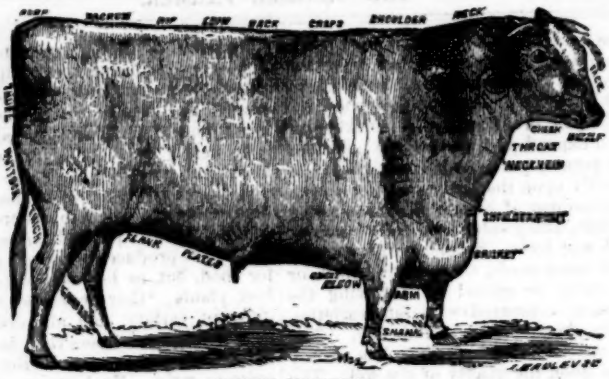
"Much difference of opinion exists as to whether potatoes intended for sets should be partially or thoroughly ripened. One of Dr. LINDLEY'S conditions for renovating the health of the potato crop, is, that the seed-tubers shall be 'thoroughly ripened—thoroughly organized.' The chief objection which has been urged against the practice of using immature sets, is founded on the notion that it must, in the course of time, cause the plants to become unhealthy. On the other hand it is clear that under-ripened sets have proved highly beneficial in mitigating the curl and dry-rot disease. I believe it is equally certain that they invariably produce more vigorous and productive plants than perfectly ripe tubers of the same variety. I was first taught this lesson by some villagers who were noted for the earliness of their potatoes. For two or three successive seasons I obtained my seed-stock from them, and was always assured it was of the same early variety they grew themselves. But I could not produce my crops so early as the villagers by at least a fortnight; and being unable to account for this difference, I resolved to buy the first potatoes they brought to market having the appearance of being nearly ripe. I did so, and the tubers were so immature that they shrivelled almost like prunes before the time of planting; but I found I was now enabled to grow them not only nearly as early as the villagers, but larger also; and the increased size of the tubers was doubtless a consequence of the greater vigor of the plants afforded by these under-ripe sets.

"Mr. KNIGHT planted an early variety in July; the tubers produced were soft and watery and unfit for food, but, as he anticipated, they afforded the best plants; 'they presented the appearance of a different variety, and afforded a more abundant crop, and larger tubers than he had ever obtained from the same variety.' But the crop was not quite so early. Mr. KNIGHT attributed 'this variation in the periods of maturity of the crops solely to the different degrees of luxuriance in the plants, and to the increased size of the tubers in the one.' But I suspect the difference was not solely owing to these causes.

"We see in a backward spring how impatient vegetation seems to be at the restraint which is imposed upon it, and with what rapidity and energy plants grow in such a season when the weather becomes favorable. A peach tree which Mr. KNIGHT had grown under glass, he afterwards planted out by the side of a tree of the same variety which had always been grown in the open air; and Mr. KNIGHT observed that the former unfolded its blossoms nine days earlier, and ripened its fruit three weeks earlier, than the latter. The forced plant commenced and finished its annual growth much earlier in the preceding year, than the plant which had been constantly grown in the open air. Its season of rest, therefore, sooner expired; it became sooner excitable in spring, and thus with the same stimulus of heat and light, it was enabled to make greater progress and mature its fruit in less time. And so it is with potatoes. The villagers, as I afterwards learned, grew two crops in the same year; the seed-tubers they sold were from the second crop, but the sets they planted were from the first crop; and this accounts for he difference in the period of ripening. The earlier the tubers are ripened, the sooner will the produce of those tubers come to maturity in the following year."

KNOWS, TO THE EXTENT OF HIS NOSE.—Anything that the horse can touch with his nose without being harmed, he does not fear. Therefore the hand, the halter, girth, blanket, saddle, harness, umbrella, buffalo robe, or whatever is brought in proximity to him, should first be introduced to and touched by that sensitive organ. A knowledge of these important facts, as we learned by attending a course of his lectures, is the main secret of RAREY'S success in his horse-taming. His strap method of throwing horses is useless, except in cases of aggravated ill-temper—and such cases are usually the result of mismanagement.

COTTON IN CALIFORNIA.—The *California Farmer* states that GEO. HOWELL, of Grand Island, "has planted the present season about forty acres of cotton."



POINTS OF CATTLE.

POINTS OF FAT CATTLE.

WHATEVER theoretical objections may be raised against over-fed cattle, and great as may be the attempts to disparage the mountains of fat—as highly-fed cattle are sometimes designated—there is no doubt of the practical fact, that the best butcher can not sell anything but the best fatted beef; and of whatever age, size or shape a half-fatted ox may be, he is never selected by judges as fit for human food. Hence, a well-fatted animal always commands a better price per pound than one imperfectly fed, and the parts selected as the primest beef are precisely the parts which contain the largest deposits of fat. The rump, the crop and the sirloin, the very favorite cuts—which always command from twenty to twenty-five per cent. more than any other part of the ox—are just those parts on which the largest quantities of fat are found; so that, instead of the taste and fashion of the age being against the excessive fattening of animals, the fact is, practically, exactly the reverse. Where there is the most fat, there is the best lean; where there is the greatest amount of muscle, without its share of fat, that part is accounted inferior, and is used for a different purpose; in fact, so far from fat's being a disease, it is a condition of muscle, necessary to its utility as food—a source of luxury to the rich, and of comfort to the poor, furnishing a nourishing and healthy diet for their families.

Fattening is a secretive power which grazing animals possess, enabling them to lay by a store of the superfluous food which they take for seasons of cold or scarcity. It collects round the angular bones of the animal, and gives the appearance of rotundity; hence the tendency to deposit fat is indicated by a *roundness* of form, as opposed to the *fatness* of a milk-secreting animal. But its greatest use is, that it is a store of heat-producing aliment, laid up for seasons of scarcity and want. The food of animals, for the most part, may be said to consist of a saccharine, an oleaginous, and an albuminous principle. To the first belong all the starchy, saccharine and gummy parts of the plants, which undergo changes in the digestive organs similar to fermentation before they can be assimilated in the system; by them also animal heat is sustained. In indolent animals, the oily parts of plants are deposited and laid up as fat; and, when vigor and strength fail, this is taken up and also used in breathing to supply the place of the consumed saccharine matter. The albuminous, or gelatinous principle of plants is mainly useful in forming muscle; while the ashes of plants, the unconsumable parts, are for the supply, mainly, of bone, hair and horn, but also of muscle and of blood, and to supply the waste which continually goes on.

Now, there are several qualities which are essentially characteristic of a disposition to fatten. There have not, as yet, been any book-rules laid down, as in the case of M. GUENON's indications of milking-cows; but there are, nevertheless, marks so definite and well understood, that they are comprehended and acted upon by every grazier, although they are by no means easy to describe. It is by skillful acumen that the grazier acquires his knowledge, and not by theoretical rules; observation, judgment and experience, powerful perceptive faculties, and a keen and minute comparison and discrimination, are essential to his success.

The first indication upon which he relies is the *touch*. It is the absolute criterion of *quality*, which is supposed to be the keystone of perfection in all animals, whether for the pail or the butcher. The skin is so intimately connected with the internal organs, in all animals, that it is questionable whether even our schools of medicine might not make more use of it in a diagnosis of disease. Of physiological tendencies in cattle, however, it is of the last and most vital importance. It must neither be thick, nor hard, nor adhere firmly to the muscles. If it is so, the animal is a hard grazier, a difficult and obstinate feeder—no skillful man will purchase it—such a creature must go to a novice, and even to him at a price so low as to tempt him to become a purchaser. On the other hand, the skin must not be thin, like paper, nor flaccid, nor loose in the hand, nor flabby. This is the opposite extreme, and is indicative of delicateness, bad, flabby flesh, and, possibly, of inaptitude to retain the fat. It must be *elastic* and velvety, soft and pliable, presenting to the touch a gentle resistence, but so delicate as to give pleasure to the sensitive hand—a skin, in short, which seems at first to give an indentation from the pressure of the fingers, but which again rises to its place by a gentle elasticity.

The *hair* is of nearly as much importance as the

skin. A hard skin will have straight and stiff hair; it will not have a curl, but be thinly and lankly distributed equally over the surface. A proper grazing animal will have a *mossy* coat, not absolutely curled, but having a disposition to a graceful curl, a semifold, which presents a waving inequality; but as different from a close and straightly-laid coat as it is from one standing off the animal at right angles, a strong symptom of disease. It will also, in a thriving animal, be licked here and there with its tongue, a proof that the skin is duly performing its functions.

There must be, also, the full and goggle *eye*, bright and pressed outward by the fatty bed below; because, as this is a part where Nature always provides fat, an animal capable of developing it to any considerable extent will have its indications here, at least, where it exists in excess.

So much for feeding qualities in the animal, and their conformations indicative of this kindly disposition. Next come such formations of the animal itself as are favorable to the growth of fat, other things being equal. There must be *size* where large weights are expected. Christmas beef, for instance, is expected to be large as well as fat. The symbol of festivity should be capacious, as well as prime in quality. But it is so much a matter of choice and circumstance with the grazier, that profit alone will be his guide. The axiom will be, however, as a general rule, that the better the grazing soil the larger the animal may be; the poorer the soil, the smaller the animal. Small animals are, unquestionably, much more easily fed, and they are well known by experienced men to be best adapted to second-rate feeding pastures.

But, beyond this, there must be *breadth* of carcass. This is indicative of fattening, perhaps, beyond all other qualifications. If rumps are favorite joints and produce the best price, it is best to have the animal which will grow the longest, the broadest and the best rump; the same of crop, and the same of sirloin; and not only so, but breadth is essential to the consumption of that quantity of food which is necessary to the development of a large amount of fat in the animal. Thus, a deep, wide chest, favorable for the respiratory and circulating functions, enables it to consume a large amount of food, to take up the sugary matter, and to deposit the fatty matter—as then useless for respiration, but afterwards to be prized. A full level crop will be of the same physiological utility; while a broad and open frame-work at the hips will afford scope for the action of the liver and kidneys.

There are other points, also, of much importance: the head must be small and fine; its special use is indicative of the quick fattening of the animal so constructed, and it is also indicative of the bones being small and the legs short. For constitutional powers, the beast should have his ribs extended well towards the thigh-bones or hips, so as to leave as little unprotected space as possible. There must be no angular or abrupt points; all must be round, and broad, and parallel. Any depression in the lean animal will give a deficient deposit of flesh and fat at that point, when sold to the butcher, and thus deteriorate its value; and hence the animal must be round and full.

But either fancy, or accident, or skill—it is unnecessary to decide which—has associated *symmetry* with quality and conformation, as a point of great importance in animals calculated for fattening; and there is no donbt that, to a certain extent, this is so. The beast must be a system of mathematical lines. To the advocate of symmetry, the setting-on of a tail will be a condemning fault; indeed, the ridge of the back, like a straight line, with the outline of the belly exactly parallel, viewed from the side, and a depth and squareness when viewed from behind—which remind us of a geometrical cube rather than a vital economy—may be said to be the indications of excellence in a fat ox.

Now, these qualities are inherent in some breeds; there may be cases and instances in all the superior breeds, and in most there may be failures.—*Jennings' Cattle and their Diseases.*

MARKING SHEEP.

Mr. S. C. Patter, of Warner, N. H., in answer to an inquiry, gives his method of marking sheep as follows in the *Country Gentleman*:

"The ear should be punched with a No. 9 punch, and allowed to get perfectly healed before putting in the rivet. Care should be taken not to head the rivet too tight, in which case it would be likely to rot out. It should be headed on the inside for the sake of convenience, as we wish to refer to the number oftener than to the initials. The rivets are such as are used by harness makers. Mine cost $1 per hundred, all stamped.

"We also stamp our sheep on the side with our initials, as it is very convenient if sheep happen to get mixed or strayed. A composition made of tar and lamp black, or boiled linseed oil and burnt umber, mixed to the consistency of cream, is much used.

"Many use this instead of rivets to number the sheep, but it is apt to become nearly obliterated before the next shearing, especially on merinoes."

Coffee Growing in Vermont.—A paragraph is going the rounds of the papers to the effect that a certain Doctor in Vermont has Java coffee growing in his garden, and that it is less susceptible of frost than beans, tomatoes or corn. The *Germantown Telegraph* well remarks:

"One would suppose from the foregoing that coffee was a vegetable, instead of a tree sometimes growing fifteen or twenty feet in hight. Do beans, tomatoes and corn stand out all winter? What a comparison to make! We have seen coffee trees growing in the open ground here in Germantown, and they stood the (summer) weather just as well and a little better than the aforesaid vegetables, but they were kept in a green-house for at least six months in the year."

Posts and Stakes, for fencing, should be cut, pealed, and have the surface of those parts to be inserted in the soil, charred. This will greatly enhance the actual value of the same by preventing decay. Set them top down, and they will last greatly longer than if set the other way.

STEAM CULTIVATION.

Col. C. W. Salader, of Kentucky, is writing a series of articles on "Steam Cultivation" for the *Valley Farmer*. The following remarks in regard to the arrangement of the fields, &c., necessary for the economical application of steam power to the various operations of plowing, harrowing, reaping, &c., will be read with interest:

"In looking over the history of past experiments in this department of science, I have failed to discover a single snstance where any practical system has been proposed by which to arrange and manage the farm or plantation whereon the agency of steam is to be made the primary force.

"It would seem, indeed, that the only idea treated by actual experiment, has been that of devising some plan by which the soil might be broken up, regardless of the expense that would attend it. I have ever considered it but a part of the thing to be accomplished, to devise a steam plow that might please the multitude witnessing its operations, while, at the same time, the wood and water is furnished, and the general management of the machine conducted in such a manner as to call in question the economy of doing the work upon this principle. And until that all-important question can be satisfactorily disposed of, I never expect to see the agency of steam serve the farmer or planter to that extent I now so confidently believe it will do.

"I may go so far as to satisfy you, beyond all doubt, that my machinery is capable of accomplishing, in the most perfect manner, all that is claimed for it; that it will plow deeper and more thoroughly than has ever yet been done by steam; that it is capable of plowing from sixteen to thirty-two acres per day of ten hours, and can perform a greater variety of farm work than has ever before been attempted in one and the same machine; yet, I will have but half succeeded in making steam cultivation a positive success, if I fail, at the same time, to point out a sensible, economical and practical system for the arrangement and management of the farm or plantation upon which it is to become a permanent fixture.

"To run the machine about within the inclosure of a fair ground, and tear up the ground here and there, to the infinite delight of the spectators—particularly the ladies, boys and newspaper reporters—is one thing, and well enough in its way, but to adapt the farm to such a machinery, and the machinery to the farm, for constant work, day in and day out, and in such a manner as to reduce everything to a system of perfect convenience, and with due regard to economy, is another and different act in the play altogether. The one is but the farce in the great drama of "Steam Cultivtaion," while the other is the sober reality of the thing aimed at.

"The one great difficulty which has confronted all past attempts to settle the question of economy in the use of the steam plow, consists in the fact that this monster plowman has required altogether too much waiting upon for a common field laborer. He has in all cases compelled his employers to furnish one wagon and team to keep him supplied with wood while at work, and another team to carry water to him, and has generally required altogether too many overseers.

"The best machine I have ever seen at work in this way, required five men to manage it—two men and two teams to keep it going with wood and water. Now, when we take into consideration the cost of the machinery, the interest on that investment, its wear and tear, cost of seven hands and two teams, fuel, &c., and the fact that there never has been worked, in a satisfactory manner, over twelve acres per day of ten hours, we are not slow in making the discovery that the same amount of work can be done cheaper with the patient ox.

"All this, however, is the result of attempting to adapt the steam plow to the farm or plantation, regardless of that preparation and arrangement absolutely necessary to adapt the farm to the steam plow. For without that preparation of the farm and plantation, expressly adapting it to the new system of cultivation, we can never get rid of the difficulty above referred to. If the farm be not adapted and expressly arranged for the working of the steam plow, we must always employ it with that degree of disadvantage that will render its adoption objectionable in point of economy.

"If we are satisfied of the practicability of the machinery proposed for steam cultivation, and desire to adopt it, our first duty is to ascertain what alteration and preparation is necessary to be made upon the farm before we can prudently receive and profitably employ this iron servant of all work.

"If, therefore, your humble correspondent was consulted upon this point, he would have to inform you, that before you can think of farming by steam profitably, you will have to prepare the farm expressly for such purpose.

"As I have already stated, when we get to farming by steam, it will be done on a large scale. Therefore, in devising our plans for a steam farm, we lose sight of ten and twenty-acre fields, and think only of those that contain from 100 to 500 acres.

"If you are blessed with an abundance of fencing material, and conclude that you will have no fields smaller than 100 acres, I shall expect you to tear down the fences upon the old farm or plantation, and rebuild them so as to form 100-acre fields, or as near that as may be convenient, and at the corners of these fields, where they meet in the center of each 400 acres, I shall direct you to dig a well, and connect to it a force pump, that shall be operated from a belt-wheel upon the engine of the steam plow, and by which means the machine will be enabled to draw up into its tank the water it requires. Over this well I want you to build a rough, but substantial house, of sufficient capacity to admit of the engine running into it from either one of the four fields, to take on wood and water while at work, and to have ample room to store away a large quantity of prepared wood or coal for the use of the engine. If it is wood you expect to use for fuel, I shall want you to be provided with a portable circular saw and frame, set up within said building—which hereafter we will call the station house—which likewise shall be operated from a belt-wheel upon the engine, for the purpose of making the machine saw its own wood.

"But if we conclude to have our fields of a more extensive character, so as to embrace from 400 to 500 acres, I shall in that case recommend the digging of such well and the building of such station house in the centre of the field, and when the machine is set to work, have it commence operation at the farther extremities of such field. The machine will, therefore, be working toward the station, and at each time it is compelled to go in for wood and water the distance to travel is shortened, and the land worked will not have to be passed over again by the engine. But if the machine is doing mowing or reaping, then it will commence next the station and work away from it, thereby preventing the necessity of running the machine over the standing grass or grain.

"To every 400 or 500 acres there must be one station house as reccommended.

"If the farm is devoted wholly to the culture of grain, the station should be provided with the necessary granaries. It must be the store-house not only for the steam plow and its machinery, but for the threshing machine also. In short, it must be made the depository for everything used and produced upon the land allotted to it.

"The arrangements for doing the grinding needed upon the place, should also be embraced in the station house, and operated by the engine.

"It should also contain an appropriate place for the portable blacksmith's forge and tools required for the sharpening of plows, shoeing of horses, and repairing generally.

"Having the farm or plantation arranged as above described, and equipped with the machinery already recommended, you are ready, beyond all doubt, for the introduction of steam to agriculture successfully and profitably.

"We have no longer any need of teams to haul the wood and water to the machine while at work, for the farm is now so admirably adapted to the machinery, that the two teams and four of the hands usually employed, can be dispensed with. In place of having to carry the wood and water over the field after the machine, the machine runs to the station, draws its own water, and is there replenished with the required fuel. When it has exhausted its supply of wood and water, the plows are raised clear of the ground, and the machine runs into the station, obtains its supplies and returns to its work again—at no time requiring over thirty minutes in doing so. It would have to run into the station but three times a day: at 9 A. M., 12 M. and 4 P. M., for wood and water, to complete the day's work.

"The system of steam cultivation under consideration is particularly applicable to the unimproved prairie lands of the South and West. For, in establishing a new farm or plantation, the expense of alteration which is demanded of those already established, is avoided. And the arrangements of the new places will be more complete, generally speaking, than those that are altered to suit the new system."

It is estimated that twenty thousand persons were present at the unveiling of the statue of the late Prince on the memorial monument in the garden at South Kensington.

"LAMPAS" IN HORSES.

"The horizontal bar," says Dr. Dadd, "in the roof of the horse's mouth, is undoubtedly intended to aid the animal to retain food in the mouth while it is being masticated. They are abundantly furnished with blood vessels and nerves, and are therefore very sensitive. When colts are teething, the disturbance of the adjacent parts sometimes cause these parts to be inflamed and swollen. Then the animal can not eat without pain, and uninformed persons have ascribed the apparent falling off of appetite under such circumstances, to a disease called "lampas." To remedy the supposed ailment, it has been recommended, and is still practiced in some localities, to burn out the swollen bars with a red-hot iron made for the purpose. The operation is an unnecessary and injurious cruelty. The portion of the mouth thus destroyed can never be replaced, and thus the power of perfect mastication is impaired. The only surgical operation allowable in cases needing assistance, is to lance the inflamed parts, the same as a physician would treat the gums of a child in case of difficult teething. This can easily be done with a sharp penknife. After lancing, it is recommended to wash the mouth with two ounces of tincture of myrrh to a pint of water, or a strong solution of alum in water. Feed the colt on bran-mashes and grass—withholding all grain until he eats without difficulty."

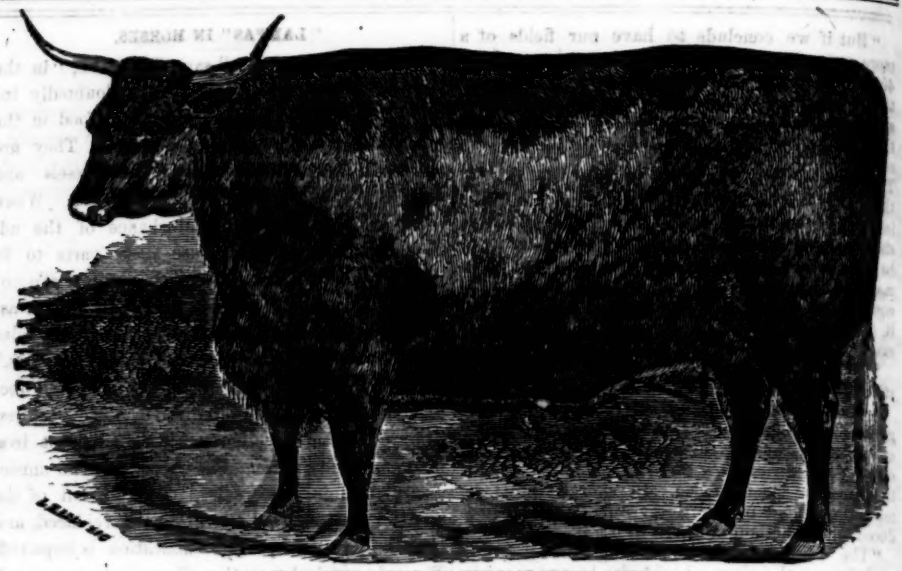
BEST TIME TO CUT TIMBER.

A writer in the *Scientific American* says:

"I have found the months of August, September and October to be the three best in the year to cut hard-wood timber. If cut in these months the timber is harder, more elastic and durable than if cut in winter months. I have, by weighing timber, found that of equal quality got out for joiners' tools, is much heavier when cut and got out in the above named months than in the winter and spring months, and it is not so liable to crack.

"I have walnut timber on hand which has been cut from one to ten years—with the bark on—which was designed for ax-helves and ox-bows, and not a worm is to be found therein. It was cut between the first of August and the first of November. I have other pieces of the same timber cut in the winter months, not two years old, and they are entirely destroyed, being full of powder-post and grub worms. Within the last ten or twelve years I have stated the result my of observation on, and experience of, cutting timber in different seasons of the year, to many of my neighbors and others; and all who have made the trial are satisfied that the above statement is correct."

Ants.—Camphor dissolved in whisky and sprinkled on the places they frequent will drive away ants.



A DEVON STEER. BRED BY THE LATE PRINCE ALBERT.

A DEVON STEER.

It is known to our readers that the late Prince Albert took a deep interest in agriculture. He was a successful breeder, especially of Devon cattle. The portrait of a Devon Steer which we now present to the readers of the *Genesee Farmer* "has the repute of being the first Devon bull-calf ever bred by His Royal Highness the Prince Consort." He took the first prize at the Birmingham Fat Cattle Show, and the second prize at the Smithfield Club Cattle Show. "Tradition," says the *London Farmers' Magazine*, from which we take the cut, "records him as a very neatly-formed animal; not standing high, but thick and full in his frame, and beautifully fed, with flesh very firm and of excellent good quality.

Onions for Cattle.—A correspondent of the *New Hampshire Journal of Agriculture* has great faith in the efficacy of a peck of onions for ridding cows or oxen of lice. He claims to have found them an infallible remedy in his practice. They also give tone to the stomach, and are especially valuable in warm weather, when working cattle will lie in the shade at noon-time, and refuse to eat.

Rock Salt for Horses.—Place a few lumps of rock salt in your horse manger. He will lick it daily, and with advantage to his health. This is perhaps the best way to supply this article to this animal, and the most economical.

Large Crops of Corn.—From the report of the committee on Indian corn crops for the Hingham (Mass.) Agricultural Society, it appears that a portion of the soil of the Old Colony still maintains its reputation for large yields of this grain. There were three entries for the premiums offered in 1862 for the largest quantity of corn produced on one acre of land, and the yield obtained by the several competitors is reported as follows: Caleb Hobart, 109½ bushels; Charles W. Cushing, 107½ bushels; James Cushing, 80 bushels 48 pounds. The weight of C. W. Cushing's corn, per bushel, was about 52½ pounds; that of the other competitors about 57 pounds. The cost of these crops per bushel, deducting one-fourth of the value of the manure applied, is stated by the committee as follows: The crop of Mr. Hobart, 64 cents 6 mills; that of C. W. Cushing, 50 cents; that of James Cushing, 88 cents 1 mill.

To Cure Sheep from Jumping.—A correspondent of the *Ohio Farmer* gives the following curious account of the method adopted by him to prevent his sheep from jumping the fences of his pasture:

"I want to tell you about my jumping sheep, and how I broke them: I got them in a pen built sufficiently high to hold them; I then caught the ringleaders one at a time, and made a small hole in each ear. I then took a cord or string and ran through the holes in the ears, then drew the ears together close enough to keep them from working the ears. I then let them out, and they are as quiet as any sheep."

SPIRIT OF THE AGRICULTURAL PRESS.

APPLYING MANURE IN THE AUTUMN.—The last number of the *Country Gentleman* contains a valuable article on "Fine Pulverization of Manure." The importance of incorporating the manure with the soil is insisted upon. "After the manure is spread upon the soil, and before plowing in, great benefit is derived by thorough harrowing with the top soil, thus breaking finely both the manure and the soil, and mixing them well together.

"Another way for the perfect diffusion of the manure among the particles of earth, is to spread the manure in autumn, so that all the rains of this season may dissolve the soluble portions and carry them down among the particles, where they are absorbed and retained for the growing crop.

"In experiments which we have witnessed, where the manure for the corn was thus applied in autumn, it has afforded a yield of about seventy bushels per acre, when the same amount applied in spring gave only fifty bushels. A thin coating of manure applied to winter wheat at the time of sowing, and well harrowed in, has increased the crop from seven to ten bushels per acre—and in addition to this, by the stronger growth it has caused, as well as by the protection it has afforded to the surface, it has not unfrequently saved the crop from partial or total winter-killing.

"In cases when it is necessary to apply coarse manure at once, much may be done in lessening the evils of coarseness by artificially grinding it into the soil. The instrument called the drag-roller—which is like the common roller set stiff, so as not to revolve—has been used to great advantage for this purpose, by passing it over the surface in connection with the harrow. We have known this treatment to effect a thorough intermixture, and to more than double the crop obtained by common management with coarse manure."

DON'T SEND POOR SHEEP TO MARKET.—The New York *Tribune*, in a recent report of the sheep market, says: "Mutton in good condition sells at 7 to 8 cents per pound. The prospect of prices ruling low from this time on are almost certain, as pelts, although all the time increasing in value, do not increase in price. A large proportion of the sheep in market of late are too thin for profit to the producer or consumer, and it is upon this class that all the serious losses to drovers have occurred. Will they bear this in mind: that good mutton sheep always sell readily at a fair price in this market, and that it is sometimes even difficult to get rid of poor old sheep at any rate short of ruinous to owners. Farmers sometimes buy such stock, but we have not seen one in market for a month at least."

TIME FOR CUTTING TIMBER.—"We have often urged our readers," says the *Country Gentleman*, "the importance of cutting rail and other timber in the summer. Experiments of our own, and frequent observation, have satisfied us that soft wood, cut when the bark peels from it freely, and when it will rapidly season, lasts at least twice as long as winter or spring cut timber. The latter seasons slowly and becomes partially sap-rotten; the former dries thoroughly and hardens like horn."

THE PRICE OF WOOL.—WALTER BROWN'S *Monthly Wool Circular* says: "We have to report a dull market in domestic fleece during the past month, caused by the extreme figures at which farmers have held their wools in the country, and the unwillingness of manufacturers to pay such prices, even in this market, while there exists so much doubt as to what goods will bring when made. In such a state of affairs we can not expect much activity, and should this dullness continue, growers may have to accept considerably less for their wool than they could have obtained in the early part of the season; still, while everything is so unsettled, and so many and various causes are operating upon the interests of the trade, it is almost impossible for any one to predict with any degree of certainty the state of the market in the future, and those best acquainted with the business confess themselves at fault. We are of opinion, however, that extreme prices will not prevail this year, on account of the large stock of foreign wools now in market which are being brought considerably more into use than ever before, thus lessening, in a corresponding degree, the demand for domestic wools. But little of the new clip has come to market; what has been bought in the West has been chiefly for manufacturers, and they now wish that their purchases had been smaller. The market for pulled wool has also been dull, and although the stock is light prices have declined."

"WILL IT PAY TO USE PLASTER?"—This is a question frequently asked. LEVI BARTLETT, in the *Country Gentleman*, closes an article on the subject with the following paragraph, which contains much truth:

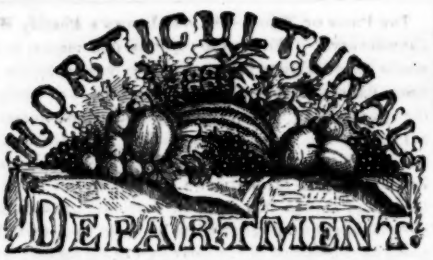
"That plaster is a cheap and valuable manure on many farms, has been thousands of times proven beyond all cavil; and it is equally true that on other farms its application *will not pay*. Experiments alone can practically settle the question for each and every farmer, how far the purchase and use of it will be for or against his pecuniary interest; and he should be governed in this matter accordingly."

In this section, on our uplands, plaster almost invariably is a profitable application to clover.

LICE ON CATTLE.—A correspondent of the *Boston Cultivator* says: "No one ever saw an animal in good condition lousy, and no one ever saw a poor one, that was so for any length of time, that was not. This I consider proof enough; but if any one doubts, let him try the remedy of good feed, and he will soon see how much superior it is to all the washes so highly recommended. The decay of the skin, consequent on the change from fat to lean, produces lice, and the way to cure a disease is to remove the cause." This remedy is not new, but it is entirely *safe* and generally quite effectual.

COTTON IN ILLINOIS.—The *Illinois Farmer* says: "One-half acre of cotton was so nearly ruined by the cut-worm that we had it plowed up and planted to late sweet corn. In all parts of the State we hear the same complaint in regard to this crop, and it is highly probable that some means will be devised to stop this depredator on this crop, or we shall not be able to grow it."

A WONDERFUL EWE.—The Annandale *Herald* states that JAMES BOYES, of Middlebie, has a Cheviot ewe seventeen years old, that has given birth to forty lambs, and seems likely to hold out for several years to come!



WALKS AND TALKS IN THE GARDEN—NO. V.

"Come and look at this bed of double Zinnias. The plant is rather coarse, but it is easily raised, grows freely, and the flowers, when you get good ones, are superb. Here is one as large and double as a dahlia."

"Let us measure it."

"It is exactly three inches in diameter, or *nine inches in circumference!*"

"These balsams are fine. There are few flowers that have been more improved. One would hardly suspect that they are the same plants as our old fashioned Lady Slipper."

"They were never great favorites of mine. The foliage is too dense and the plant too large. The flowers are handsome, but you cannot see them to advantage."

"That is an objection, but if the plants are repeatedly transplanted they become stocky, and the growth of the leaves and stalks is checked while the flowers are finer and more abundant."

"When gathered and placed with a little water in a shallow dish they retain their freshness some time, and are really beautiful flowers."

"Can I save the seed?"

"Certainly; but the probability is that it will not be very good. I do not mean that it will not grow, but that the flowers produced from it will not be as fine and as double as these are from imported seed. Good seed is obtained from plants stunted by being grown in poor soil in small pots, and with little water. The seed grown from plants so treated produces double flowers."

"Mr. Vick showed me yesterday a double portulacca that was very beautiful. It is perfectly double. I thought at first that it was a rose. He has them of all colors and they grow as easily and flower as well as the single kinds."

"I have tried this year for the first time the Champion of Scotland Pea. It beats anything in the pea line I am acquainted with. Champion of England is excellent—but it is too rampant a grower. Champion of Scotland does not grow so high and the pods and peas are larger. Look at these. The pod is very long and well filled, and the peas are as large as a medium white bean."

"Veitch's Perfection is also a splendid pea. My friend the Doctor has raised them this year for the first time and thinks they are just right; they bear well and are of good size. It does not take as long to pick and shell a meal of them as of the old fashioned small kinds"

"I injured my peas this year by turning over the vines. They were not poled, and the west wind had blown them over on the east side of the row. I thought I would put a few short slats in the ground for them to rest on. I stuck them on the east side of the row and in doing so turned over the peas on to the west side. This seemed to check their growth, and they did not do well. I suppose the wind injured them."

"Few people realize how much damage we sustain from high winds even in summer. I have taken considerable pains this season to raise good water melons — and have succeeded very well. The Black Spanish, especially, is quite large, and the Orange promises well; but the best water melons we have in the garden are some chance sown ones, (Black Spanish,) that came up among the parsneps. The vines cling to the parsneps and are not blown about by the winds."

"I have heard the same thing stated in regard to weeds among melons and cucumbers. The vines clinging to them instead of to each other, and are more evenly distributed over the ground and less liable to be blown about."

"There may be some truth in this idea, but weeds have no business in a well-cultivated garden. It is not much trouble to peg down the runners of your melons, pinching them in at the same time. It is certainly true, however, that shelter from winds is very important."

"Can any one tell what is the reason that an apparently healthy cucumber or melon vine should wither up and die so suddenly. I have noticed it for years, and have thought it was caused by an insect at the roots or on the vines, but have failed to find him even if he is there."

"I had a strong, healthy cucumber plant growing in an old cold frame that withered up and died a few days since without any apparent cause; and here you notice is a melon plant with two main vines. One of these vines is dead, while the other is still apparently healthy and vigorous. Why

one half the plant should die so suddenly and the other half be healthy, I cannot imagine, unless the main stem has been punctured by an insect—but there is no evidence that such is the case."

"I suppose it is a fact that a particular part of a plant derives its support from a particular part of the roots. And if this is so, anything which injures or destroys a particular root would injure or destroy that portion of the plant deriving its nourishment from it—while the remainder of the plant might be healthy."

"It is on this supposition that I consider the fact that a part of a pear tree blights and dies, while the rest of the tree is unaffected, is no objection to my theory of the fire blight being caused by a fungus at the roots."

"Leibig, in his new work on 'The Natural Laws of Husbandry,' says, 'organic matters accumulating largely in the subsoil, act very injuriously, especially in clay, where they decay much more slowly than in a lime soil. The process of decay is communicated to the sickening roots, in which spores of fungi find a suitable soil for their development.'"

"The fact is, any woody matter in decaying *slowly* in the soil produces fungus, and that the spores of fungus can be taken up by the roots, is, to say the least, not improbable. The pear orchards in this vicinity that have suffered most from the fire blight, are on soil filled with the roots of trees, and on examination these old roots are found to be covered with fungus."

"In the last number of the London *Florist and Pomologist*, James Barnes, of Bicton, in an article on the Deodara Cedar, says that this 'most noble, ornamental and graceful-growing tree' is failing in some parts of the country. The trees become rusty, and lose their foliage at the points of the shoots. The largest tree of this kind at Bicton 'is sixty feet high, with a trunk, two feet from the ground, six feet nine inches in circumference, branching beautifully and gracefully to the green sward, in diameter from thirty-six to forty feet.' It must be a magnificent tree; but that is not what I intended to read. Here is what he says about fungus at the roots of trees:

"There were also four large and beautifully twining plants growing at each corner of a square piece of water here about twelve years ago. The foliage of one, after some hot sunny days, turned almost suddenly from a beautiful luxuriant green to pale yellow. On examination, the foliage was covered with a very fine, minute mildew. Here the plant stood a yellow, unhealthy looking object till the following spring, unable to put forth new foliage. As the season and sun advanced off it fell, leaving a naked, dead tree."

"This seems to have been almost as sudden as the pear blight."

"Mr. Barnes examined the roots, and says:

"I turned off the turf for a good distance about it, with fork and spade the earth was thrown out. Why, the roots were as white as a miller's jacket, eaten up with fungus. It had run up entirely through the heart or centre of the tree; it was as soft, dry, and druscy as an old dry-rotted beam or board out of a cellar, eaten up with dry rot. What is the cause of this? Was it because it stands high and dry several feet above the surface of the water? No, *the soil contained a good many old roots and pieces of wood that had been intermined some years before by the shrubbery, and had been grubbed. This rubbishy wood was white with mildew, druscy and brittle.* Here, no doubt, was the enemy, and the effect was exactly like larch rot, or disease called by some."

"In another part of the grounds there was a fine clump or plantation of these trees. They did remarkably well. But after they had been set out twelve years one of the trees became sickly. What was the cause? Mr. Barnes tells us:

"Why, on examination, an old hedge had formerly run across the spot, had been grubbed and leveled. The old rotten, musty, mildewed, decayed roots and sticks left in the ground were undoubtedly the forerunners of this mischief, to which several other fine trees have since been sacrificed."

"Is it not possible that the disease known as the "Yellows" which is so injurious to peach trees in New Jersey is caused in the same way. It would be interesting to know if farmers there have not been in the habit, after an orchard gets old, of grubbing up the trees and setting out new ones on the same land."

"Here is a good illustration of the advantages of summer pruning the grape. The Doctor thought I pruned too close. So to satisfy him I left one vine unpruned. The others I shortened in to within two or three leaves of the bunches of grapes, and pinched off the laterals. These vines are now loaded with large, handsome clusters, while that left to itself is one mass of shoots hanging over from the top of the trellis, completely smothering the few poor bunches of grapes inside. These rampant shoots draw all the nourishment from the grapes, besides shutting out the sun."

"There can be no doubt that grapes need summer pruning. Perhaps a few gardeners prune to excess, but the majority of the people prune too little. In traveling about the country it is seldom that one sees a properly trained grape vine. The majority are left to themselves. People either

don't know how to prune them, or else they think it is too much trouble."

"It is really very little labor if attended to in time. I know a man who pruned his grapes this summer with a pair of garden shears. The vines had been neglected, and he went at them with a vengeance. The shoots were hanging over from the top of the trellis in a perfect mat. These he clipped off without ceremony. He then went over the vines on the trellis, cutting out the shoots that were not needed, and shortening in the others, and snipping off the laterals till the vine presented quite a respectable appearance. The whole operation of pruning three large vines did not occupy more than half an hour."

"Two years ago last spring I grafted over quite a number of apple and pear trees. It was the first grafting I had ever performed, but the grafts nearly all took, and have done well. Some of the apples are now bearing. We have had quite a nice lot of Red Astrachans, and I really think they taste all the better because I grafted them myself! Some of the pears are also bearing this year. One graft of Bartlett is loaded with fruit. It has twice as many pears on it as it would be safe to leave on a dwarf pear tree three years from planting."

"The currant worm has not been quite so prevalent this year as last. If people generally would only kill them—either with the thumb and finger or with white helibore or slaked lime, we should soon get them within reasonable bounds."

"We must not hope to raise nice fruit for any length of time without meeting with some drawback. In a new country it seems right and proper that, having so many other things to contend against, insects should not be as numerous. But as the country becomes settled, and we begin to enjoy greater advantages, we must no longer hope to escape."

"The currant worm is an old enemy. In England it has been known for centuries, but as a general rule it does comparatively little damage. If neglected they spread over the gardens and become as destructive as in this country. We did not attend to them in time. It would have been an easy matter to have destroyed them when they first made their appearance."

"I was in Connecticut last week and saw a hedge of currants surrounding a garden, loaded with large, fine fruit. The worm had not yet made its appearance there, and there was a real old fashioned crop of currants. The good ladies of the village were busily engaged in picking the fruit and making jelly for the soldiers."

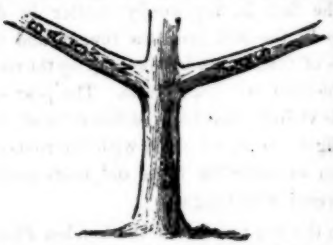
MARKING TREES.

Every body has felt the want of some effective plan of marking fruit trees in the orchard. All sorts of labels have been tried, and most persons depend for strict accuracy on having a manuscript list made of the trees as they are numerically arranged on the ground. This is very well; but as one has to have the list always about, or sometimes likes to graft several kinds on one tree, the plan is so far objectionable.

Now, it is a well known fact that the scratch of a pin on the bark leaves a scar that endures almost with the life of the tree. We were shown a beech tree, recently, in Delaware county, by a middle aged man, with the initials of his father still plainly traceable, which were scratched on the bark when his father was a boy. The same can be done with fruit trees, as we believe we saw suggested some years ago in an agricultural journal, but which, like a good many good ideas that yearly float over the great sea of the agricultural press, has nearly been forgotten.

We saw some trees a few days ago that had been marked in this way, and it reminded us that the idea was worth resuscitating.

The annexed cut will explain the idea clearly:



The letters of the name are scratched on the under side of the branch, and the letters one above the other. In the case we saw, there were two kinds on the two arms of the tree: Baldwin and Northern Spy—the main or central stem being of another kind, the name of which we do not now remember.—*Gardeners' Monthly.*

Ornamenting Vacant Fire-places in Summer.

"E. A. M." the popular writer on Window Gardening in the *London Gardeners' Chronicle* has in one of the June numbers a plan for ornamenting vacant fire-places in summer by having climbing plants in low pots trained upon a folding wicker screen, the pots placed upon the floor. If still greater decoration is desired, the chimney-piece can be fitted with a board that curves prettily and edged with basket work three inches high, with a tin lining case which prevents any damp escaping. Ferns or mosses, or any low-growing plants, can be put around the edge—in pots, of course—and some taller ones at the back.

CURRANTS.

THE CHERRY CURRANT AND COMMON RED DUTCH VARIETY—CURRANT JELLY.

Eds. GENESEE FARMER: My neighbor has a number of bushes of the cherry currant growing side by side with the common, or Red Dutch currant, on strong, rather low, and rich soil. I stepped in the other afternoon that I might avail myself of the opportunity of contrasting these two varieties in the height of the fruiting season. I found the bushes of each of a good bearing age, under good culture, and with room sufficient to develop them. The cherry variety had darker colored, stouter and handsomer looking leaves, while the common sort had more leaves, and they kept the fruit better shaded. The cherry currant was of a more rugged, erect habit of growth, while the branches of the common sort were more curved, and in this way gave better protection to the fruit. The fruit of the cherry was somewhat larger, but not longer bunched than the common sort, and in quantity the yield was considerably less. I noticed that the fruit of the cherry had rotted on the bunches in the proportion of not far from one-third of the crop; while the common sort had not lost half this proportion; owing, I inferred, to the protection above alluded to. The acidity of the cherry was not so great as some statements had led me to anticipate. I found but little difference between it and the Red Dutch.

The sum of my conclusion was to make no investment in cherry currants. For a number of years past I have compared the Victoria with the Red Dutch. Under the same cultivation the Victoria will produce longer bunches than the Red Dutch, with a fine long stem, bare of fruit for an inch or more, where it connects with the branch, which enables even a careless one to pick the fruit without "squatting" it. If the Red Dutch receives good cultivation, by which I mean has sufficient room allowed it, is kept mostly or entirely free of suckers, and has about one-half of the growth of the previous season trimmed off before the buds start in the spring, a marked change is produced; instead of the jammed masses of short-stemmed bunches, so common and so difficult to pick without crushing the fruit, the bunches grow of great length, (I have counted twenty-one currants on a bunch,) with as much of the stem free of fruit, and thus facilitate rapid gathering, as has the Victoria. Under the same system of cultivation the Red Dutch will yield a greater quantity of fruit than the Victoria.

Those who raise currants for the market will find it greatly to their interest to give them good cultivation, as by so doing they not only increase the size and quantity of the fruit, but get bunches so much longer and are so much more easily gathered that the cost of picking will be reduced one-half.

The La Versaillaise comes highly recommended, but of its merits I have had as yet no personal experience. To those who fancy an unique variety, a currant, striped red and white, (the name I can not this moment recall,) presents a singular appearance. It is quite acid. I do not recommend it for eating purposes, excepting only such as grow their own sugar.

A single hint to those making currant jelly. The simplest process is this: take a pound of white sugar to a pint of juice, boil the juice separately for five minutes, meanwhile heating the sugar very hot in an oven; stir the sugar into the juice, and boil one minute. A nice flavoring can be obtained by adding a very small quantity of raspberry juice before boiling. JAMES J. H. GREGORY.

Marblehead, Massachusetts.

A JAPANESE GRAPE.

In the *Genesee Farmer* for June, 1861, page 187, we published the following:

Mr. R. FORTUNE, in his last letter from Japan to the London *Gardeners' Chronicle*, mentions a grape that grows about Yeddo, that he thinks worthy of introduction into this country. He says:

"The vine of this district, which you may as well name at once the "Yeddo vine," produces a fruit of great excellence. The bunches are medium sized, the berries are of a brownish color, thin-skinned, and the flavor is all that can be desired. This grape may be valued in England, where we have so many fine kinds, and most certainly will be highly prized in the United States of America. A few years ago I was traveling from Malta to Grand Cairo, in company with Mr. BRYANT, the celebrated American poet, and a genuine lover of horticultural pursuits. This gentleman informed me that, owing to some cause, our European vines did not succeed much on the other side of the Atlantic, and suggested the importance of introducing varieties from China, where the climate, as regards extremes of heat and cold, is much like that of the United States. I had never met with what I considered a really good variety of grape in China, and therefore have not been able to act on Mr. BRYANT's suggestion. At last, however, we have a subject for the experiment, and I urged its impoatance on Dr. HALL, who is an American citizen, and who has already introduced a number of plants to his country from China. He enters warmly into the matter, and no doubt will accomplish the object in view. I therefore conclude this article, by giving notice to your readers on the other side of the water to look out for the arrival of the "Yeddo vine."

We hope to hear of the arrival of the "Yeddo vine."

We understand that this grape has been received by Messrs. PARSONS & Co., of Flushing, N. Y. It is said that they intend to send out young vines of this variety the present autumn, that it may be extensively tried in different parts of the country. In what way it is to be distributed is not stated.

THE PHILADELPHIA RASPBERRY.—The editor of the *Germantown Telegraph*, who is very cautious how he recommends new fruits, speaks highly of this seedling raspberry, raised by Mr. FULTON, of Philadelphia. It is very productive and of excellent quality, and firm enough for marketing.

SOAP SUDS FOR CARROTS.

William Carmichael, of the Dunmore Gardens, Falkirk, writes to the London *Florist and Pomologist* as follows:

"It is generally most difficult for a gardener to obtain an abundant and healthy crop of carrots. The gardens here are about ten acres in extent, and till lately, every endeavor to obtain an abundant crop of this useful vegetable has failed—as it has been invariably cut off by the grub. We have, however, I am glad to say, been perfectly successful during last season, and have obtained a pure crop—clean and beautiful. In the autumn, we trenched the ground two spades deep, and left it in a rough state. In the first week of April, we leveled the ground with Dutch hoes, and drew drills 15 inches apart. Before sowing the seed, we applied guano at the rate of about 4 cwt. to an acre. The seed came up well, but just as they were fit for thinning they assumed, as usual, a yellow appearance—owing to the attacks of the grub. We then adopted an expedient which, I am glad to say, has proved highly successful. Having a large quantity of soap suds beside us—as we constantly employ them for the wall trees—and having taken the rose from the watering pot, we applied a considerable quantity to the rows. The result of this new experiment was very gratifying, as the crop assumed, shortly afterwards, a fine healthy appearance. The fact that we have employed guano for the last several years without producing the same effect, leads me to the conclusion that my success was chiefly owing to this very simple and easily procured remedy. Should it in future years prove the successful remedy I have found it this year to be, I shall be most happy to acquaint your readers with it as the remedy, though exceedingly simple and easily procured, will, I believe, prove highly beneficial."

How to Blanch Celery for Exhibition.—Of all exhibitions we have ever seen, Bolton, in Lancashiere, takes the lead for the admirable manner in which the vegetables are staged—everything being so clean and orderly; even the potatoes, leeks and celery are as clean as new pins. What, however, struck us most, was the clean white color of the celery—from the root to nearly the top being quite free from diseased specks and discolorations. On inquiry, we find it is the practice not to earth up the celery at all, but simply to tie it up as it grows, and wrap coarse paper around it, occasionally removing it to see that the stalks are growing straight, or to assist them in doing so, when wanted for exhibition purposes. The flavor may not be quite so good, or it may not be quite so crisp, as when grown in the ordinary way, but the color is certainly much better, for exhibition purposes when grown in this way, and it is not inferior in size. The new imperial pink celery appears to us to be the best of the pink or red kinds for showing, as it produces very little heel, and is a large-growing, solid, crisp, fine-flavored kind. The new imperial white is fully equal to it—the only difference being in the color. In fact, the former, as shown at Bolton, was bleached to almost a clear white.—*Gossip of the Garden.*

PRESERVING FRUIT.

From the experience of a number of years in putting up various kinds of fruits, we learn that the less they are cooked the more nearly the natural flavor of the fruit is preserved—provided the heat has been raised to a sufficient degree as to entirely expel the air contained in the cells of the fruit. Beyond this, cooking is unnecessary. For heating the fruit we have practised various methods: at first it was scalded in a kettle and then put into the jars; but of late years, particularly with the different berries, our practice has been to put them at once into the jars, and then set them into the water, raising the heat to the boiling point, letting them stand in the water until the contents are thoroughly heated through—taking the fruit from one of the jars to fill up the shrinkage, or some is scalded in a kettle for this purpose, and then sealing immediately. By putting the fruit into the jars before they are scalded, it retains its form much better. The most convenient vessel for setting the jars into for scalding, that we have tried, is a square tin pan, as large as can be conveniently heated over the stove—say to hold ten or twelve one-quart jars at a time, in two rows. The depth of the pan should be nearly equal to the hight of the jars. We have learned one lesson by rather costly experience: If the jars set close down upon the bottom of the pan they are very liable to break, owing to the confined air in the cavity at the bottom. To obviate this, a small wire is bent in a zigzag form, so that some portion of the wire will come under the bottom of each jar.—*Country Gentleman.*

Big Pears and Pumpkins.—To have big pears or other fruit, just work on the stalk that bears them the point of an adjoining shoot—then you shall see what you shall see. So says a French amateur enthusiastically in the fruit line. If you want big pumpkins and squashes, just bore a little gimlt hole in their rind when the fruit is a few weeks old, and push in a long piece of cotton, with the loose end in a pan of water. The cotton will suck up the water, and the pumpkin will suck the cotton, and by the time your fruit is ripe you will have the largest pumpkin that ever was seen.

Protection from the Cut Worm.—We have recently seen a mode for preventing the cut worm from destroying young, recently set cabbage plants, consisting of wrapping a piece of stiff paper around the stem when the plant is set out, so as to extend a little above and an inch or two below the surface. We have adopted this mode more than twenty years—although it is now recommended as new—and we can vouch for its entire efficiency. Thick writing paper appears to answer the purpose best, and old letters may be torn up and employed. Stiff wrapping paper and even burdock leaves have answered about as well, the object being merely to place a protection about the stem, where the cut worm usually assails it.—*Country Gentleman.*

Young People's Page.

THE TRUMPET-RAT.

Buckland, in his *Curiosities of Natural History*, gives the following account of a lawsuit in France about a rat:

Pliny, Buffon and Lacepede have made us acquainted with the races of animals which inhabit the two hemispheres, but none of these savants, any more than the naturalists their successors, have made mention of the "trumpet-rat," and a search for it among the antediluvian animals discovered by science will be equally unsuccessful. The "trumpet-rat" is modern; its existence dates from the time the Zouaves were in Africa. The action at law brought by M. Triguel against Girome, a retired Zouave, makes us believe that this is the animal in question.

The Plaintiff. "Gentlemen, this individual has cheated me out of a hundred francs ($20), and has, at the same time, wilfully abused my confidence. He knows that I am much interested in geology, antiquities, natural sciences. I have collections of fossils, of medals, of rare animals, of curious plants. One day he called upon me, and said: 'Sir, I have a kind of animal which has never been mentioned by any naturalist.' 'What is it, Sir?' 'It is a "trumpet-rat."' 'What do you call the trumpet-rat?' 'Sir, as the name indicates, it is a rat which has a trumpet.' 'Where is it?' 'On his nose like a rhinoceros.' 'And you have it alive?' 'Alive and well; if you wish to see it, you have only to come to my house.' 'Directly; come along.'

"I was very anxious to see this strange animal. We arrived at his house, and he shows me in a cage an enormous rat, very lively and in good condition, and which really had on its nose a sort of slender excrescence about two centimetres long (two-thirds of an inch), covered with hair like the body of the animal, with vertebræ in it, and, a most extraordinary thing, larger at the summit than at the base, the contrary to what it ought to be in the usual course of things. I ask to examine this phenomenon; he puts it in my hand, and holds its paws and head that I might examine at my ease this extraordinary trumpet. I ask him if it were not a dupe, and mystification, and to convince myself I take a pin and force it into the trumpet. The animal cried out, winced, and a drop of blood came from the prick. The experiment was conclusive—it was really a trumpet forming a part of the rat.

"I wonder. I ask this man if he would sell his rat. He answers in the affirmative. I ask his price. Fifty francs. I pay it without any bargaining, and I bring the animal home. I invite my friends and servants to see it, the cry of admiration was universal—I was enchanted.

"Some one says to me, 'You ought to procure a female (this was a male).' I had thought of that, but having seen but one rat at the house of the person who sold it to me, I concluded that he had no more. I determined, therefore, to go directly to see, and I ask him if it were possible to get a female. 'Nothing easier,' he answered me; I have written to Africa, and they have sent me many trumpet-rats, of which I have two females.' With these words, he brings out a cage full of rats like that which he had sold me. He chooses me a female, for which I pay him fifty francs ($10). I carry it off more enchanted than ever. Some months afterwards the female has young; I look at them, they had not trumpets. I say to myself, 'Without doubt they will sprout hereafter like elephants' tusks.' I wait one month, two months, six months; every day I look at the nose of my rats, but the trumpet never appeared.

"In a house where I go frequently I make the acquaintance of an officer who had served a long time in Africa. 'Tell me,' I says to him one day—'you have been in Africa—do you know the trumpet-rats?' 'Perfectly,' he answers me. 'Ah! then you can inform me.' I then tell him my story. Then this gentleman began to laugh, as though his sides would split. I say to myself, 'Certainly then I have been duped.' When he was calm I beg him to explain the motive of his hilarity. Then he tells me what follows: 'The trumpet-rat, he tells me, is not a supernatural thing—it is an invention due to the leisure moment of the Zouaves. This is how they make them: you take two rats; you tie their paws firmly on a board, the nose of one close to the end of the tail of the other; with a pen-knife or a lancet you make an incision into the nose of the rat which is hindermost, and you graft the tail of the first into the nose; you tie firmly the muzzle to the tail, and you leave the two rats in this position for forty-eight hours. At the end of the time the union has taken place, and the two parts have grown together; then you cut off the tail of the rat which is in front to the required length, and let him go, but still keep the other tied to the board but with his head loose, and you give him something to eat. At the end of a month or more the wound is perfectly healed, and the eyes of the most curious scrutators would not see a trace of the grafting. This is what these Zouaves do; the rats have no trumpet—you have been deceived, (*les rats n'ont pas de trompe; vous avez été trompé*).

"On the part of the defendant, it was urged that he had certainly made up the rats as has been stated, but he affirms that he had not sold them to the plaintiff as rats 'born' with a trumpet.

The President. "'Is this true, M. Triguel?

M. Triguel. "'You understand, Sir, after the experiment which I made with the prick of the pin, which bled and made the animal cry, I ought to believe that the trumpet was natural.'

The President. "'Then the defendant told you that it was a particular kind of rat?'

The Plaintiff. "'Yes, without doubt.'

The Defendant. "'In fact—it is a particular kind of rat.'"

Verdict for the Zouave—the trumpet-rat maker.

What two animals had the least luggage in the ark?—The fox and the cock, for they only had a brush and comb between them.

How many young ladies will reach from London to Brighton, it being fifty miles? Fifty, for a miss is as good as a mile.

Which is the fastest, heat or cold? Heat, because you can catch a cold.

Miscellaneous.

THE JASMINE.—We are told that a Duke of Tuscany was the first possessor of this pretty shrub in Europe; and he was so jealously fearful lest others should enjoy what he alone wished to possess, that strict injunctions were given to his gardener not to give a slip—not so much as a single flower—to any person. To this command the gardener would have been faithful, had not love wounded him by the sparkling eye of a fair but portionless peasant, whose want of a little dowry, and his poverty, alone kept them from the hymenial altar. On the birth-day of his mistress he presented her with a nosegay, and to render the boquet more acceptable, ornamented it with a branch of jasmine. The *povera figlia*, wishing to preserve the bloom of this new flower, put it into fresh earth, and the branch remained green all the the year. In the following spring it grew, and was covered with flowers. It flourished and multiplied so much under the fair nymph's cultivation, that she was able to amass a little fortune from the sale of the precious gift which love had made her; when, with a sprig of jasmine in her breast, she bestowed her hand and wealth on the happy gardener of her heart. And the Tuscan girls, to this day, preserve the remembrance of this adventure, by invariably wearing a nosegay of jasmine on their wedding-day; and they have a proverb which says, a young girl worthy of wearing this nosegay is rich enough to make the fortune of a good husband.—*Notes and Queries.*

EXTRAORDINARY FRENCH TELEGRAPHIC INVENTION.—The Abbe Caselli's recent invention, the pan-telegraph, is described as one of the greatest scientific wonders of the present day. A dispatch written at Paris is reproduced at Marseilles without the assistance of any clerk, with the most rigorous fidelity, as is also a portrait sketch, or drawing of any kind. The Empress has had her likeness telegraphed to some friends in the provinces, and recently the inventor telegraphed a painting of a full-blown rose from the Observatory to the Bureau of the Telegraphic Administration. The petals were of a beautiful pink color, and the leaves of an equally good green—in short, were exactly like the tints of the original. Rossini also telegraphed to Marseilles by this apparatus a melody which he improvised in honor of the inventor.

A VALUABLE BUCKET.—Among the many curious modes of making money in Australia, none, I think, surpasses the following: A surgeon told me that he went one day into the tent of a brother medicus, on the Bendigo, just as a patient was going out. "I have been stopping a tooth," said the surgeon. "Do you get good cement here?" inquired my friend. "Admirable!" replied the surgeon. "I saw an old gutta-percha bucket selling in a lot of old tools one day at an auction. I bought the lot for the sake of the bucket, which cost me five shillings. I have already stopped some hundreds of teeth with the gutta-percha at a guinea each, and shall, no doubt, stop thousands with it before the old bucket is used up. It is a fortune to me. My name is up for an unrivaled dentist, and they come to me from far and near."

THE PROGRESS OF EDUCATION.—At the hearing of a recent case before the English local magistrates, a certificate was handed up to the bench, on behalf of one of the prisoners, of which the following is a *verbatim* copy:

——— May 23 | 61

To Your Honour

this is to Certify that A—— F—— has been A scholler for upwards four Years of Mine and Duering that time has conducted himself While Under My Care with that Steddy and Industerious Sperit that becomes A Boy of his and from the information that I have received and my Experiance of his past Charrecter I cincerely Belive him innocent of the Charge brought before You.

I ramain Yours
Henery ——
P——k Chool
Drummager of the
——— Lancishire
Airtillery Volunteer

Notwithstanding that "Henery" "cincerally" "believed" in the "inocence" of his "Steddy and Industerious" "scholler," the boy pleaded guilty to the charge against him.

QUEEN OF SCOT'S PRAYER.—*Messrs. Editors:* I send you a translation of the prayer of the Queen of Scotts, which I think is equally correct and more poetical than any you have lately published. W. L. G.

"Oh God of my fathers
My hope is in Thee;
Jesus my dearest,
Now liberate me.
In fetters and chains
In sorrows and pains,
My desire is to Thee.
Deep feeling
Appealing,
And reverently kneeling,
I adore, I implore,
Thou wouldst liberate me."

[*Congregationalist.*

GRAMMATICAL JOKING.—"What is the reason of a blow leaving a blue mark after it?" asked an inquiring young man of a medical student. "It's easily accounted for," was the reply; "for you know that *blow* in the perfect makes *blew*."

"I CAN'T reconcile differences," said Septimus Hardy. "For instance, there is nothing more regular in its coming round than dinner-time—and nothing less certain than dinner."

"SAM, why don't you talk to massa and tell him to lay up treasures in heaven?" "What for? What de use of laying up treasures dere, where he never see 'em again?"

WHY are photographers the most uncivil of all tradespeople? Because when we make application for a copy of our portrait they always reply with a negative.

CURRAN was once asked by one of his brother judges, "Do you see anything ridiculous in this wig?" "Nothing but the head," was the reply.

"WHAT church do you attend, Mrs. Partington?" Oh! my paradox church where the Gospel is dispensed with!"

IF there is "many a slip 'twixt the cup and the lip," will drinking out of the saucer insure freedom from such mishap?

Ladies' Department.

ORIGINAL DOMESTIC RECEIPTS.

Contributed to the Genesee Farmer.

Hop Beer.—We have the pleasure of giving this month a receipt for beer which is really valuable. The beer is easily made, and will keep six or eight months. Three months after it is fermented, it is almost equal to ale. This receipt is for fifteen gallons: Twelve ounces of hops, six quarts of molasses, ten eggs. Put the hops in a bag, and boil them fifteen minutes in three pailfuls of water. Put in the molasses while hot, and pour immediately into a strong ale cask, which can be made perfectly air-tight, and put in the remainder of the water cold. Let the mixture stand until cool, and then add the eggs. This beer will not ferment in cold weather unless put in quite a warm place.

Lemon Pie.—(Mrs. Long.)—One lemon, one cup of sugar, two eggs, three tablespoonfuls of flour, one cup of milk; grate the rind of the lemon; mix the whole together, leaving out the whites of the eggs; pour in the milk last. Bake in a deep plate lined with pastry. Beat the whites of the eggs to a stiff froth; sweeten with four tablespoonfuls of sugar; put it on the top when baked, and return the pies to the oven and brown lightly.

Preserving Peaches in Vinegar.—To twelve pounds of peaches take six pounds of coffee sugar; add one pint best cider vinegar, and simmer the sugar and vinegar together; pour boiling water upon the peaches; remove them in two minutes; pour off the water and wipe them dry without breaking the skin; put them into the sirup and boil gently until the fruit is cooked through. This preserve is very good, but will not keep long.

Cream Cake.—One cup of sugar, one and a half cups of flour, two eggs; break them into a teacup; fill up the cup with sweet cream; add one teaspoonful cream-tartar, one-half teaspoonful soda, one-quarter of a nutmeg, and a little salt. This cake is very good when successful. It should be eaten while fresh.

Soft Jumbles.—Two cups of sugar, one cup of butter, one cup of milk, four eggs, one-half teaspoonful saleratus, flour enough to make the cake a little thicker than pound cake. Pour into deep tins an inch thick. Bake in a quick oven. When cold cut in squares.

Loaf Cake without Yeast.—One and a half cup of butter, three cups of sugar, one cup of milk, five cups of flour, four eggs, one teaspoonful of soda, three teaspoonfuls of cream-tartar, rasins, nutmeg, and a glass of wine or brandy.

Baked Flour Pudding.—Six tablespoonfuls of flour wet as for starch and mixed with a quart of boiling milk, five eggs and a piece of butter the size of an egg. Bake half an hour.

Clove Cookies.—Three pounds of flour, one pound of sugar, one pound of butter, one ounce of cloves. Wet with molasses enough to roll out thin. Bake quick.

Rice Balls.—Boil rice in water as usual; put it into teacups, and turn out on a deep platter; when cold take a pint of milk, a little cream, two eggs, two tablespoonfuls of wine, and sweeten like custard. Whip it all together, and turn over the balls.

Pork Cake.—Fifteen ounces salt pork chopped fine; pour on it a pint of boiling water; one teacup of molasses, two of sugar, one tablespoonful of soda or saleratus, cloves and cinnamon, one pound of fruit, nine cups of flour.

Tomato Soy.—Take smooth, ripe tomatoes; put them in salt water for three or four days; drain them; prick each one, and lay them in a jar with sliced onions and spices until the jar is filled, then cover close.

Delicate Cake.—(Mrs. Beach.)—One-half pound of butter, one pound of sugar, one pound of flour, one teacup of milk, the whites of seven eggs, one teaspoonful of cream-tartar, one-half teaspoonful of soda.

Picalilly.—Take green tomatoes, cabbage, green peppers and onions; chop them, and press them for twenty-four hours; add salt and spices, and put into a jar; pour on vinegar enough to moisten them.

Mrs. Garrett's Cake.—Three cups of sugar, one cup of butter, four cups of flour, five eggs, one-half teaspoonful of soda. Just before setting in the oven add the juice of one lemon and the grated rind.

Clove Cake.—One pound of flour, one pound of sugar, one-half-pound of butter, one pound of rasins, four eggs, one nutmeg, one tablespoonful of cloves, one teaspoonful of cinnamon and one of saleratus.

Cologne.—(Mrs. Bean.)—Five drachms garden lavender, five drachms lemon oil, three drachms oil of Bergamot, three drops oil of cloves, three drops of musk, one quart alcohol (proof.)

Naples Biscuit.—One-half pound of sugar, one-half pound of flour, four eggs. Drop on buttered paper; sift sugar over them; flavor with lemon; bake quick.

Mrs. Wollcott's Cake.—Two cups of flour, one cup of sugar, one-half cup of butter, one-half cup of cream, two eggs, a little saleratus.

Pickled Plums.—Seven pounds of plums, four pounds of sugar, one quart of vinegar, and one ounce each of cinnamon and cloves.

Sausages.—Forty pounds of meat, one pound of salt, a teaspoonful of pepper and two of herbs to each pound of meat.

Curing Hams.—Four quarts of salt, two quarts of molasses, six ounces of saltpetre, to one hundred pounds of meat.

Blackberry Wine.—Eight quarts of juice, twenty pounds of sugar. Add water enough to make six gallons.

Raised Biscuit.—Five pints of flour, one quart milk, one-quarter pound of butter, one-half cup of yeast.

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THE GENESEE FARMER FOR 1864.

We design to make great improvements in the Genesee Farmer for 1864. We have made arrangements for a supply of paper of much better quality, and shall use new type throughout. The amount of reading matter will also be increased. We are determined to make the Genesee Farmer worthy of the extensive patronage it has so long enjoyed.

The subscription price, paid strictly in advance, will be seventy-five cents.

Those subscribing at this time for 1864 will receive the three last numbers of this year, together with the whole volume for 1864. In other words, they will receive three numbers for nothing. Will not our friends attending the Fairs take a copy of the Farmer with them and call the attention of their friends to this liberal offer. All such favors will be appreciated.

PREMIUMS.

1. To any person sending us two subscribers for 1864, we will send a copy of the *Rural Annual and Horticultural Directory* for 1863. Price, 25 cents.
2. For five subscribers we will send a copy of the *Manual of Agriculture*. Price, 75 cents. [This work should be in the hands of every young farmer in America.]
3. For six subscribers we will send a copy of Mrs. Hale's *Modern Cookery Book*. Price, $1.
4. For seven subscribers we will send a copy of *Everybody's Lawyer*, or the *Horse and his Diseases*. Price, $1.25.
5. For ten subscribers we will send a complete set of the *Rural Annual and Horticultural Directory*, handsomely bound in two volumes. Price, $2.50.

The above works will be sent postage paid by return mail.

The Markets.—The reports from Europe still continue on the whole favorable as to the yield of the present harvest. In England frosts occurred on the mornings of the 18th and 19th of July, which did much damage to the late wheat. But the bulk of the crop was too far advanced to suffer materially.

Future prices will depend a good deal on the solution of the "Polish question." Russia is making gigantic preparations for a possible war with the three great powers. If diplomacy fails to settle the question, we shall have a war that will shake all Europe, and the price of produce will materially advance.

The reports of the harvest in this country are generally favorable. We shall doubtless have a large surplus of grain to export. The price in New York will be determined by the price in Europe, and the premium on gold. In the interior another element comes in to affect prices—the cost of *freight*. Freights are now lower than they have been for some time, and the western farmer or dealer reaps the benefit.

Gold the first of July was at a premium of 45 per cent. Our victories brought it down to 22 per cent. It then rallied a little and has remained pretty constantly for some time at about 27 per cent.

The latest papers we have received from England quote wheat in Liverpool as follows: "English white 9s. 6d. to 10s. 3d., red 9s. to 9s. 6d.; American, white 9s. 6d. to 11s. 3d., red 8s. 8d. to 9s. 3d.; Canadian, white 9s. to 10s. 6d., red 8s. 4d. to 8s. 9d.," per cental of 100 lbs. Our readers can easily ascertain the price of a bushel of 60 lbs. Taking red wheat at an average of 9s. (or $2.16,) per cental, the price would be a fraction less than $1.30 per bushel. This is *in gold*. With gold at a premium of 27 per cent, this $1.30 is worth $1.65. This, therefore, is the price of a bushel of American red wheat in Liverpool.

We know a gentleman in this city who has just shipped 14,000 bushels of red winter wheat to Liverpool. It cost him in store in New York $1.27. He had it recleaned, blowing out about 80 bushels, and this and the expenses of getting it to the vessel brought up the price to $1.30. The cost of sending it to Liverpool, including freight, insurance, dockage, primage, duty and commission, will amount to about 32 cents per bushel. In other words, the wheat will *cost* him in Liverpool $1.62. This leaves a profit of 3 cents per bushel! This is certainly not very large, and if gold should decline to 20 per cent the profit would be on the other side of the ledger.

If there should be no war in Europe, and the crops prove as good as reported, there is little probability that wheat will advance in England. If we should return to *specie*, what would be the price of wheat in New York? If the expense of shipping it across the ocean should be the same as now, it is easy to answer this question from the above figures. It is now worth in Liverpool $1.30 per bushel. It costs 32 cents to send it from New York to Liverpool. It would, therefore, be worth 98 cents in New York. What would it be worth in Chicago; what in Iowa? We expect to see very "hard times," the moment we return to specie, especially in the West.

The midge is said to have injured the wheat in the Lake Counties of Canada very seriously.

Agricultural Exhibitions for 1863.

STATE FAIRS.

Int'l Wheat Show,	Rochester, N. Y.,	Sept. 8—10
National Horse Fair,	Hartford, Conn.,	Sept. 8—10
New Jersey,	Patterson,	Sept. 8—11
Vermont,	Rutland,	Sept. 8—11
New York,	Utica,	Sept. 15—18
Ohio,	Cleveland,	Sept. 15—18
Canada West,	Kingston,	Sept. 21—25
Illinois,	Decatur,	Sept. 28—Oct. 3
Pennsylvania,	Norristown,	Sept. 29—Oct. 2
Kentucky,	Louisville,	Sept. 15—20
Canada East,	Montreal,	Sept. 15—18
Indiana,	Indianapolis,	Sept. 28—Oct. 3
Iowa,	Dubuque,	Sept. 15—18
Michigan,	Kalamazoo,	Sept. 23—26

COUNTY FAIRS.

NEW YORK.

Cattaraugus,	Olean,	Sept. 22—24
St. Lawrence,	Canton,	Sept. 22—24
Ulster,	Kingston,	Sept. 22—24
Schuyler,	Watkins,	Sept. 24—26
Chenango,	Norwich,	Sept 26—Oct. 1
Delaware,	Delhi,	Sept. 29—Oct. 1
Queens,	Hempstead,	Oct. 1— 2
Orange,	Mexico,	Sept. 22—24
Washington,	Salem,	Sept. 9—11
Herkimer,	Ilion,	Sept. 23—25
Chenango,	Oxford,	Sept. 21—22
Erie,	Buffalo,	Sept. 16—18
Wyoming,	——,	Sept. 22—23
Oneida,	Rome,	Sept. 7—10
Albany,	Albany,	Sept. 29—30. Oct. 1—2
Rensselaer,	Troy,	Sept. 7—11
Cortland,	Cortlandville,	Sept. 22—24
Lewis,	Lowville,	Sept. 9—11
Alleghany,	Angelica,	
Broom,	Binghamton,	Sept. 8—10
Cayuga,	Auburn,	Sept. 29—Oct. 1
Saratoga,	Saratoga Springs,	Sept. 1— 4
Columbia,	Hudson,	Sept. 29—Oct. 1
Duchess,	Washington Hollow,	Sept. 22—24
Genesee,	Batavia,	Sept. 30—Oct. 1
Jefferson,	Watertown,	Sept 29—30
Monroe,	Rochester,	Sept. 8—10
Orleans,	Albion,	Sept. 17—18
Otsego,	Cooperstown	Sept. 30—Oct. 1
Ontario,	Canandaigua,	
Seneca,	Ovid,	Sept. 16—18
Warren,	French Mountain,	Sept. 23—25
Yates,	Penn Yan,	Sept. 29—Oct. 1

MASSACHUSETTS.

Worcester,	Worcester,	Sept. 17—18
Hoosatonic,	Great Barrington,	Sept. 30—Oct. 1
Hampshire,	Northampton,	Oct. 1— 2
Barnstable,	Barnstable,	Oct. 6— 7
Bristol,	Taunton,	Oct. 6— 0
Berkshire,	Pittsfield,	Oct. 6— 0
Essex,	Andover,	Sept 30—00
Franklin,	Greenfield,	Sept. 24—00
Hampden,	Springfield,	Sept. 6— 8
Middlesex,	Concord,	Sept. 17—00
Norfolk,	Dedham,	Sept. 24—00
Plymouth,	Bridgewater,	Oct. 1— 0

OHIO.

Ashtabula,	Jefferson,	Sept. 2— 4
Butler,	Hamilton,	Oct. 6— 9
Columbiana,	New Lisbon,	Sept. 23—25
Cuyahoga,	Cleveland,	Oct. 6— 9
Delaware,	Delaware,	Sept. 30—Oct. 2
Franklin,	Columbus,	Sept. 8—11
Geauga,	Burton,	Sept. 9—11
Harrison,	Cadiz,	Sept. 30—Oct. 2
Highland,	Hillsboro,	Sept. 9—11
Huron,	Norwalk,	Sept. 22—25
Lorain,	Elyria,	Oct. 6— 9
Lake,	Painesville,	Sept 30—Oct. 2
Mahoning,	Youngstown,	Oct. 6— 8
Madison,	London,	Sept. 9—11
Marion,	Marion,	Sept. 23—25
Miami,	Troy,	Sept 30—Oct. 2
Muskingam,	Zanesville,	Sept. 8—11
Paulding,	Antwerp,	Oct. 1— 2
Pickaway,	Circleville,	Sept. 30—Oct. 2
Richland,	Mansfield,	Sept. 29—Oct. 1
Summit,	Akron,	Sept. 30—Oct. 2
Seneca,	Tiffin,	Sept. 30—Oct. 2
Stark,	Canton,	Oct. 7— 9
Trumbull,	Warren,	Sept. 29—Oct. 1
Warren,	Lebanon,	Sept. 23—25
Van Wert,	Van Wert,	Oct. 1— 2

INDIANA.

Fayette,	Connersville,	Sept. 1— 4
Harrison,	Corydon,	Sept. 8—11
Hendricks,	Danville,	Sept. 15—17
Morgan,	Centerton,	Sept. 8—11
Posey,	New Harmony,	Oct. 6— 9

ILLINOIS.

De Kalb,	De Kalb,	Sept. 15—17
Winnebago,	Rockford,	Sept. 15—18
Morgan,	Jacksonville,	Sept. 15—18
Mercer,	Millersburg,	Sept. 22—24
La Salle,	Ottawa,	Sept. 8—11
Lee,	Dixon,	Oct. 14—16
Tazewell,	Tremont,	Oct. 7— 9
Vermillion,	Catlin,	Sept. 1— 4

UPPER CANADA.

Durham, West,	New Castle,	Oct. 8— 9
Lanark,	Almonte,	Sept. 16—00
Lanark, West,	Perth,	Sept. 17—18
Toronto,	Toronto,	Oct. 8— 6
Wentworth,	Hamilton,	Oct. 13—14

A Talk about Wheat.—A few days since one of the best wheat growers of Monroe county was in our office, and the following conversation took place:

"How will wheat turn out this season?"

"Not as well as we expected. I have not yet threshed, but those who have say the yield is poor and the quality rather inferior. The weather has been so hot that the grain in some instances has shrivelled."

"Has the midge done much damage?"

"There was plenty of midge sowed this season, but it was 'sectional.' On low lands, where the wheat was late, half the crop has been destroyed. But on the oak openings little damage has been sustained."

"What system of rotation do you adopt in the oak openings."

"Sheep and wheat."

"Two very good things to go together. But how do you manage them?"

"We sow wheat every third year. It is seeded down with clover. Plaster is sown on the wheat in the spring, a bushel per acre, about the time of sowing the clover seed. It does not benefit the wheat, but insures a better catch of clover."

"Do you sow any timothy?"

"Not on the wheat land. On land which we intend to mow for some years we sow timothy and clover, but not on the land I am speaking of."

"Well, after the wheat is off, what do you do?"

"We do nothing. Let the clover grow till it is quite large the next season, and then turn in sheep. They will eat the leaves and tread down the clover stalks. These make manure. The next year pasture as close as you please, and after corn planting break up the land, and fallow for wheat again."

"Do you plow more than once. In Wheatland they do not?"

"I know they don't, but I do. After breaking it up, we harrow and cultivate to keep down the weeds, and about this time, (August,) we cross plow and afterwards harrow as needed. This is all that we do till the seed is drilled in."

"If the land is clear," he continued, "you need not break up till later. But when I want to seed down again I like to break early and cross plow."

This system of growing clover and wheat, eating off the clover on the land with sheep, keeps up the fertility of the soil. In fact, he says there is danger of the land becoming too rich for wheat. And in that case he takes off a crop of clover hay.

Formerly the system was simply to plow under a heavy crop of clover in June or July, and thus grow a crop of wheat every other year. Sheep and wheat he considers much more profitable.

Of course this system cannot be adopted on all the land on the farm. There must be some portions left for hay and other crops.

THE GREAT INTERNATIONAL WHEAT SHOW.

We would again call the attention of our readers to the International Wheat Show to be held in this city September 8th, 9th and 10th. Competition is open to the world. The following premiums are offered:

For the best 20 bushels of White Winter Wheat,.....	$150 00
For the second best 20 bushels of White Winter Wheat,..	75 00
For the best 20 bushels of Red Winter Wheat,.....	100 00
For the second best 20 bushels of Red Winter Wheat,....	50 00
For the best 2 bushels of White Winter Wheat,.....	50 00
For the second best 2 bushels of White Winter Wheat,...	25 00
For the best 2 bushels of Red Winter Wheat,.....	40 00
For the second best 2 bushels of Red Winter Wheat,.....	20 00
For the best 2 bushels of Spring Wheat,.....	20 00
For the second best 2 bushels of Spring Wheat,.....	10 00

"Competitors for these prizes will be required to furnish samples of the wheat in the ear and with the straw attached, (say fifty ears of wheat and straw;) also to furnish a written statement of the nature of the soil on which the wheat grew; method of cultivation; time of sowing; quantity of seed sown; manures, (if any used,) and mode and time of application; also the time of ripening and harvesting, and the yield per acre, with such other particulars as may be deemed of practical importance; also, the name by which the variety is known in the locality where it was grown.

"The wheat must be one variety, pure and unmixed. The prize to be awarded to the actual grower of the wheat, and the wheat which takes the prize is to become the property of the Society.

"The Prize Wheat will be sold at public auction on the grounds the last day of the exhibition; and at the same time any exhibitor can offer his wheat for sale by paying the usual percentage. This will afford an excellent opportunity for obtaining a change of seed.

"Farmers from a distance, who cannot attend the exhibition, can enter their wheat on the payment of one dollar. The wheat can be sent to the care of the President of the Society, Joseph Harris, Rochester, N. Y. The freight should be prepaid, and care must be taken to so mark the wheat that it can readily be ascertained from whom it was sent. Send in good season, and write full particulars, by mail."

Letter from John Johnston.—In reply to a request to act as one of the judges at the International Wheat Show to be held in this city September 8—10, John Johnston, of Seneca county, writes as follows:

"It would certainly have given me great pleasure to serve on the Committee at your Great Wheat Show, but I am sorry to say that I am not able to perform that duty. I was taken unwell in July of last year, and continued very poorly for over ten months. I have no disease now, but I am still very feeble. I think I have gained some strength of late, but am still weak, and altogether unable to serve as a judge. I assure you I would have been very happy to have assisted in that capacity in my much loved occupation, but age and infirmities are fast using me up.

I am afraid Seneca county cannot be represented in the show, as I have seen no wheat of prime quality this season. Our wheat was too late in ripening to be of the best quality. Whenever our wheat is not ripe, or nearly so by the 10th to the 14th of July, we seldom have a prime sample. We also had excessive rains about the time wheat was nearly ripe, which always materially hurts the sample and lessens the weight. There will be little wheat in this county that will weigh sixty pounds to the bushel this season. My neighbor on the south, a Dutchman, had some Soules wheat right on the bank of the lake, which is a good sample, but it is mixed with other wheat and would not do to compete for a premium. I lost my crop, thirteen acres, entirely, by the so-called Hessian fly. Cause, *too early sowing*. Wishing you a very successful show, I am, respectfully yours,

John Johnston.

P. S.—Corn looks splendid in general. Oats and barley were good, but many of the oats are yet uncut, and some of the barley not yet got in. They both must be much damaged by the rains.

Fair of the Royal Agricultural Society.—The great annual exhibition of the Royal Agricultural Society was held this year at Worcester. The show of Shorthorns and Herfords was excellent. The first prize of £25 for the best Shorthorn bull above three and not exceeding six years, was awarded to Jacob Wilson, of Morpeth. He is described as a "grand and massive animal, heavier and deeper, however, a good deal, in the forequarters than behind, where he is light." He is descended from Farmly blood, and farther back from blood to which Booth resorted with his most successful results. Lady Emily Pigot was very successful. She took the first prize in the class of cows over three years; and in the heifer class she also took the first prize with a heifer described by the *Agricultural Gazette* as "one of the finest animals in the yard, as true and cylindrical a barrel as was ever carried on four legs; beautifully fine head and good everywhere." In the class of heifer calves the first prize was taken by "a wonderfully fine specimen of the Shorthorn breed bred by Mr. Mackintosh, from one of the imported American bulls, out of Lady Oxford Fifth; both Booth and Bates contributing to her pedigree."

There was a fine show of sheep; the Shropshires especially being well represented, and attracting more and more attention.

Among the pigs the Berkshires were especially fine. In the classes for pigs of "any color," it is worthy of remark that none but *white* pigs were entered. We infer from this that white pigs in England, as here, are most popular.

Wool.—We have just been to two of the principal wool establishments in this city. *Nothing is doing.* One of the proprietors has gone a fishing, and the other is probably enjoying himself in his garden. They made so much money last year that they can afford to take things easy. On the other hand, the farmers are in no hurry to sell. Last year those who held on to their wool realized 10 to 20 cents per pound more than if they had sold soon after clipping. They are determined this year to get the full money value of their wool. Now and then a farmer brings a small clip to market, and sells it for what the dealers are willing to pay. Prices here range from 45 to 55 cents—the latter for wool of extra quality. In New York sales have recently been made of domestic wool at from 65 to 72 cents per pound, and one would think from these figures that prices should be higher than they are here.

We understand that several American dealers are in Canada buying wool. We do not know what they pay, but "washed Canadian" is quoted in New York at 60 cents. In Canada money this would be about 47 cents.

Down on Agricultural Papers.—It would seem that the United States Government and the Canadian Government are both opposed to the circulation of American agricultural papers in Canada. Hitherto the postage on the *Genesee Farmer* sent to Canada was three cents a year. By the new law it is twelve cents. This we have to prepay. On the other hand, Canadian agricultural papers are "Post Free;" but the Canadian subscriber to an *American* agricultural paper has to pay one cent postage on each number. In other words, *we* have to pay the United States Government twelve cents a year postage; and our subscribers in Canada have to pay twelve cents a year in addition. *Twenty-four cents* postage on a *fifty cent* paper!

Inquiries and Answers.

WILD BLACKBERRIES.—Thinking of setting out a number of wild blackberry plants, and being in doubt as to whether they would pay the trouble of cultivation, I thought I had better have your advice on the subject. (*a*) Will they bear as well, with the same cultivation, as the Lawton or Rochelle? (*b*)

What is the difference in the time of bearing between the Lawton and Rochelle? (*c*)

Where can the latter kind be had, and at what price? (*d*) —JOHN DIXON, *Canandaigua, N. Y.*

(*a*) The efforts we have seen made in transplanting the wild blackberry into a garden and cultivating them, have not been successful. A well-known horticulturist of this city, who thought there were no blackberries equal to those he used to eat when a boy, in Steuben county, was at considerable pains to get some of the plants, and cultivated them with much care in his garden; but, though they grew, they bore but little and the fruit was small.

(*b*) We think they would not.

(*c*) The Lawton and New Rochelle are one and the same thing. Probably you refer to the Dorchester—a Boston variety—which is not quite so large as the Lawton, but is of better quality.

(*d*) You will find the plants advertised in this number.

CIDER MILLS.—Apples will be abundant here this fall, and I propose making considerable cider. There is a mill in the neighborhood, but I think it would be quite as economical, and more convenient, to have a hand-mill of my own. Can you tell me where I can get a good one, and the price?—R. S. F., *Gorham, N. Y.*

There are several machines that are good. W. O. HICKOK, of Harrisburg, Pa., manufacturers an excellent one. The price is, or was, $40.

FOOT-ROT IN SHEEP.—Some eighteen months ago I bought a lot of one hundred and twenty odd Merino sheep in Trumbull county, Ohio, which were nearly all affected with the foot-rot in its worst form, and having succeeded in affecting a perfect cure, I will send my method of treatment to any one who may desire it, gratis, on receipt of a three-cent stamp to pay postage; or will, if desired, write out my method and send it to you for publication.—J. D. KIRKPATRICK, *North Liberty, Mercer county Pa.*

Please send us the receipt.

BLIGHTED WHEAT.—Please tell us what deficiency there is in the soil that causes wheat to blight on land that formerly produced good wheat, and what is the remedy.—FREEMAN POWERS, *New Castle, C. W.*

We suppose the "blight" alluded to is rust or mildew, and are of opinion that it is owing to atmospheric causes rather than to any deficiency in the soil. Underdraining is the most likely remedy.

DEEP PLOWING FOR BEANS.—Will you, or some of your correspondents, inform me, through your valuable paper, what effect deep plowing has upon beans? I supposed, before this season, that land could not be plowed too deep for any crop; but now think that beans on land plowed nine inches deep look pretty "hard." What do you think about it?—A CONSTANT READER, *Wheatland, N. Y.*

CLOVER HULLING MACHINE.—(JOHN MCFARLANE.) M. H. MANSFIELD, of Ashland, Ohio, manufacturers a clover huller and cleaner. You can learn particulars, as to price, &c., by addressing him.

"FRESH DRINK."—In some parts of England, Shropshire, for instance, the farmers brew what is called "fresh drink." The laborers are allowed three pints a day of it throughout the year, and at harvest something more—and stronger. It is made mostly of hops, and is drank when a month or six weeks old. It is too weak to keep long. A healthier or pleasanter beverage is no where to be found. But we had supposed that it could not be had in perfection out of England. When in Connecticut recently, however, we tasted a beer which comes nearer to it than anything we have before tasted in this country. The receipt for making it will be found in the Ladies' Department. We suppose its excellence is owing to the use of eggs instead of yeast. The editress of the Ladies' Department says, "three months after it is fermented it is almost equal to *ale*." No! No! It is *better* than ale. It is almost equal to "fresh drink," sharp, pleasantly bitter, and not intoxicating. Ale is too heavy and too strong.

We have received letters from Kentucky, Illinois, Iowa, Maryland and Canada, from parties who propose to send wheat to the Exhibition to be held in this city, September 8th, 9th and 10th. Ohio, Michigan, Wisconsin and Pennsylvania, up to this time (August 14th), have not been heard from. We trust these great wheat-growing States will be well represented.

We would call the attention of our readers to the advertisement of Messrs. WHEELER, MELICK & Co., the well known and extensive manufacturers of agricultural implements, machines, &c., at Albany, N. Y. Their Horse Power Threshing Machines do excellent work, and give great satisfaction.

MR. HIRAM BAKER, of New Garden, Ohio, writes us that he clipped from a three-year old Spanish Merino buck, this year, 19½ lbs. of washed wool; and from two yearling ewes 18 lbs.—one fleece of the latter weighing 9½ lbs. and the other 8½ lbs. The ewes were unwashed.

SANFORD AND MALLORY'S FLAX DRESSING MACHINE.—We have not seen this new flax brake in operation, but from the testimony of those who have there can be no doubt but that it is a most wonderful invention.

FROST IN MICHIGAN.—We are informed that a severe frost occurred in some parts of Western Michigan on the night of July 14. The corn, potatoes, beans, &c., were much injured.

ADVERTISEMENTS.

THE GENESEE FARMER.

A Monthly Journal of Agriculture and Horticulture, published by JOSEPH HARRIS, Rochester, N. Y.

Terms—INVARIABLY IN ADVANCE—SEVENTY-FIVE CENTS A YEAR.

WANTED—By a young man twenty years of age, a situation with an intelligent Fruit Grower to learn the business. Address Box 2912, New York Postoffice. sep1t

HAND AND POWER TILE MACHINES—Price $100 and $300. Tile are burned with brick. Also, the best Ditching Plow extant. Price, $11. Address sep1t F. M. MATTICK, Buffalo, N. Y.

A BEAUTIFUL MICROSCOPE, MAGNIFYING SMALL objects 500 TIMES, for 28 CENTS (coin preferred.) FIVE of different powers for $1, MAILED FREE. Address novtf F. H. BOWEN, Box 220, Boston, Mass.

FRUIT AND ORNAMENTAL TREES

FOR THE AUTUMN OF 1863.

ELLWANGER & BARRY

HAVE the pleasure to announce that they are, as usual, prepared to offer for the Fall Trade the largest and most complete stock of well-grown Fruit and Ornamental Trees in the United States.

PLANTERS, NURSERYMEN AND DEALERS

Are invited to inspect the stock, and consult the Catalogues which give prices and terms.

The following Catalogues will be sent to applicants, prepaid, upon the receipt of postage stamps, as follows, viz:

For Nos. 1 and 2, ten cents each; for No. 3 five cents; and for No. 4 three cents.

No. 1—A Descriptive and Illustrated Catalogue of Fruit Trees.
No. 2—A Descriptive and Illustrated Catalogue of Ornamental Trees.
No. 3—A Catalogue of Green-house and Bedding Plants.
No. 4—A Wholesale Catalogue or Trade List.

ELLWANGER & BARRY,
Mt. Hope Nurseries, Rochester, N. Y.

September 1, 1863.

ROCHESTER CENTRAL NURSERIES.

THE Subscriber offers for sale the present Fall a large and very complete assortment of STANDARD AND DWARF FRUIT TREES, GRAPE VINES, STRAWBERRY AND RASPBERRY PLANTS, CURRANTS, GOOSEBERRIES, BLACKBERRIES, &c., &c. Also, ORNAMENTAL TREES, both Evergreen and Deciduous—Ornamental Shrubs, Hedge Plants, Roses, Flowering Bulbs—such as Crocus, Hyacinths, Tulips, Lillies, Snowdrops, Gladioli, &c.

The stock that is offered at this time is all well grown and of the best quality, and comprises all the best and most desirable varieties known in the country, and parties wishing to purchase will do well to *inquire of the undersigned directly* in reference to it.

Great attention is paid to digging, so as to cut or bruise the roots as little as possible, and every thing sent from this establishment is packed in moss in the very best manner.

☞ Descriptive and Wholesale Catalogues sent on application and remittance of stamp for postage. Address

C. W. SEELYE, Rochester Central Nurseries,
sep Rochester, N. Y.

CRAIG MICROSCOPE!

This is the best and cheapest Microscope in the world for general use. It requires no focal adjustment, magnifies about 100 diameters, or 10,000 times, and is so simple that a child can use it. It will be sent by mail, postage paid, on the receipt of $2.25, or with six beautiful mounted objects for $3, or with 24 objects for $5. Address

HENRY CRAIG, 182 Center street, N. Y.
A liberal discount to the trade. je-1y

"THE SORGO HAND BOOK."

NOW READY—And sent free on application to agents or to the "Clark Sorgo Machine Co." Cincinnati, Ohio, Manufacturers of

HEDGES' & CLARK'S CELEBRATED CANE MILLS,

With great improvements for 1863; or of Blymyer, Bates & Day, Mansfield, Ohio, Manufacturers of the unrivalled

COOK SUGAR EVAPORATOR. jy

MAGNOLIA ACUMINATA.

HAVING been fortunate in raising a very large stock of this noble and beautiful tree—the finest of all American forest trees—we are able to offer it at very low rates, by the dozen, hundred or thousand, from four to eight feet in height. Prices given on application.

ELLWANGER & BARRY,
Mt. Hope Nurseries, Rochester, N. Y.

September, 1, 1863.

THOROUGH-BRED SHORT HORNS

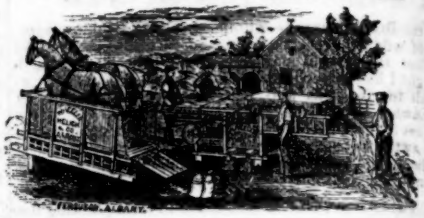
FOR SALE.—A few Cows, Heifers and Spring Bulls, descended from Imported Stock, are offered on moderate terms.

ap6t J. O. SHELDON, Geneva, N. Y.

WESTERN NEW YORK PATENT AGENCY—Office, 108 Arcade, ROCHESTER, and No. 5 Hollister Building, BUFFALO, N. Y. Patents obtained on unusually favorable terms. *Rejected Applications* prosecuted without charge unless successful. Send for a Circular.

jy3t J. FRASER & CO.

NEW YORK STATE AGRICULTURAL WORKS.



WHEELER, MELICK & CO., PROPRIETORS,

ALBANY, N. Y.,

MANUFACTURE WHEELER'S PATENT

Railway Chain Horse Powers

FOR ONE OR TWO HORSES;

LAWRENCE & GOULD PATENT RAILWAY CHAIN HORSE POWERS.

FOR ONE, TWO AND THREE HORSES;

PLANTATION OR LEVER HORSE POWER,

FOUR, HORSE OR SIX MULE GEAR;

WHEELER'S PATENT COMBINED THRESHER AND CLEANER,

No. 1, 30 inch, and No. 2, 26 inch Cylinder

EXTRA No. 1, 34 inch Cylinder.

Overshot Threshers and Separators, Circular and Cross-Cut Sawing Machines,

Clover Hullers, Feed Cutters, Horse Rakes, Horse Forks, and other Farming Machines.

☞ Circulars, containing LIST OF PRICES, and FULL DESCRIPTION, and CUTS of each MACHINE, with statements of their capacities for work, will, on application, be sent by mail, postage free.

☞ Liberal Discounts are made to dealers.

☞ Responsible Agents are wanted in sections where we have none. Address

WHEELER, MELICK & CO.,
sep8t Albany, N. Y.

GRAPE VINES.

ROCHESTER CENTRAL NURSERIES.

A COMPLETE STOCK of the valuable New Native Vines is offered to the trade by this establishment, embracing, in large quantities, Concord, Delaware, Diana, Rebecca, Ontario and Hartford Prolific, and in smaller quantities, say by the hundred or less, such valuable sorts as Adirondac, Alvey, Creveling, Cuyahoga, Elizabeth, Rogers, Hybrids, Union Village, and others. Also, in large or small quantities, the older sorts—Catawba, Isabella and Clinton. These Vines are of different ages and sizes. Prices will vary according to size, variety and quantity to be purchased. Amateurs, vintners and dealers desiring such stock should not fail to correspond with the subscriber, either before or after looking elsewhere. Address

C. W. SEELYE, Rochester Central Nurseries,
sep Rochester, N. Y.

FARM FOR SALE OR EXCHANGE.

A FARM OF ONE HUNDRED AND TEN ACRES in Van Ettenville, Chemung county, N. Y., a few miles from Elmira. There is a Saw-mill, House, &c., on the premises. Will be sold cheap, or, if desired, exchanged for property near Rochester. Further particulars can be obtained from

JOSEPH HARRIS, Rochester, N. Y.

CHOICE NATIVE AND FOREIGN GRAPE

VINES.—LENK & CO. OFFER FOR SALE A LARGE stock of Native and Foreign Grape Vines, including all the rarest and most valuable varieties. Send for a Price List.

Address LENK & CO.,
novlf. Humboldt Nurseries, Toledo, Ohio.

BLOOMINGTON NURSERY.

160 ACRES. FRUIT AND ORNAMENTAL. A very large and reliable assortment. AGENTS WANTED.

jy4t* P. K. PHŒNIX, Bloomington, Illinois.

Fruit Trees, &c.,
AT LOW PRICES.

FROST & CO.,

GENESEE VALLEY NURSERIES, ROCHESTER, N. Y.,

OFFER for the Fall of 1863 and Spring of 1864 a well-grown and large stock of

STANDARD AND DWARF FRUIT TREES

of all kinds. Also, an immense quantity of

SMALL FRUITS,

including an extensive collection of the rare sorts of NATIVE GRAPES; also of

ORNAMENTAL TREES,

including a large stock of various sizes of HARDY EVERGREENS; also, SHRUBS, ROSES, GREEN-HOUSE PLANTS, &c., &c.

Their Nurseries comprise upwards of THREE HUNDRED ACRES, so that they are enabled to furnish the ENTIRE orders of their correspondents fully and satisfactorily, and at the LOWEST MARKET RATES for Plants of the best quality.

DESCRIPTIVE PRICED CATALOGUES—No. 1 of Fruits, No. 2 of Ornamental Trees, &c., and No. 4 Wholesale List—are supplied to applicants upon receipt of a 3-cent postage stamp for each.

☞ Their Wholesale Catalogue for the Fall of 1863 will be ready for distribution in August. All communications promptly noticed. Address FROST & CO.,

aug1t Rochester, N. Y.

The Original Howe Sewing Machine!

RECENT and important improvements having been put to this Machine renders it now the most perfect before the public, and persons at a distance can order a Machine with a guarantee of its prompt and safe delivery, and that they will be able to manage it to their entire satisfaction. No more breaking needles! No more missing stitches! No trouble in making any garment, however delicate or heavy, on the same Machine, either in cambric, cloth, or leather. No person should think of purchasing a Sewing Machine without first seeing this—the latest and greatest triumph of the original inventor of the Sewing Machine.

☞ Send for a Descriptive Catalogue of styles and prices. A few responsible Agents would be dealt with liberally. Address THE HOWE SEWING MACHINES,

457 Broadway, New York,

Or E. STRAIN, General Agent for Monroe county, 117 Main street, Rochester, N. Y. jy'62-21t

AUCTION SALE OF SOUTHDOWN SHEEP.

ON WEDNESDAY, September 2d, 1863, I will offer at Public Sale at Thorndale, without any reserve, ONE HUNDRED SOUTHDOWN EWES and RAMS. They are all either imported or directly descended from recent importations from the flocks of the late JONAS WEBB, DUKE OF RICHMOND and HENRY LAGAR.

It can hardly be necessary to refer to the superior Mutton and Wool-producing qualities of this breed. At the present time their wool is the most sought after, and commands as high a price as any other kind.

Thorndale is fourteen miles from Poughkeepsie Station on the Hudson River Railroad, and nine miles from Dover Plains Station on the Harlem Railroad.

Further particulars can be learned by reference to the Catalogue of Sale, which may be had upon application to the Auctioneer, Mr. JOHN R. PAGE, Sennett, Cayuga county, N. Y., or of SAMUEL THORNE, Thorndale,

aug1t Washington Hollow, Dutchess county, N. Y.

SCHENECTADY AGRICULTURAL WORKS.

G. WESTINGHOUSE & CO., PROPRIETORS.

SEND FOR A CIRCULAR—Containing a full description of the unequalled

LEVER AND ENDLESS CHAIN HORSE POWERS,
THRESHERS AND CLEANERS,
CLOVER HULLERS,
WOOD SAWS, &c.,

manufactured by the subscribers.

☞ Particular attention is invited to a new Undershot Thresher and Cleaner, with a Riddle or Vibrating Separator.

Address G. WESTINGHOUSE & CO.,

jy-tf Schenectady, N. Y.

BONE DUST.

"THE CHEAPEST AND BEST MANURE IN THE WORLD"—Constantly on hand, in large or small quantities, warranted pure and of the best quality, made from *fresh* bones gathered from the slaughter houses in Rochester. Price from $15 to $20 per ton, according to fineness. Orders respectfully solicited. Address JOSEPH PRESTON,

je'63-1y Box 2072, Rochester, N. Y.

To Farmers,
To Dairymen,
TO COUNTRY MERCHANTS.

ALL WHO HAVE FOR SALE

FURS AND SKINS,
FRUITS, Dry and Green,
CHEESE,
LARD,
HAMS,
EGGS,
POULTRY,
GAME,
VEGETABLES,
FLOUR,
GRAIN,
SEEDS,
SORGHUM SUGAR AND SIRUP, &c., &c.,

Can have them *well* sold at the highest prices in New York, with full Cash Returns always within TEN DAYS of their reaching the City, by forwarding them to the Commission House for Country Produce of

JOSIAH CARPENTER,
33 Jay street, New York.

N. B.—The advertiser has had abundant experience in this business, and trusts that he will continue to merit patronage by the most careful attention to the interest of his patrons. The articles are taken charge of on their arrival, and carefully disposed of promptly to good cash customers, and cash returns made immediately to the owner

☞ The highest charge made for receiving and selling is *five per cent.*

A *New York Weekly Price Current* is issued by J. CARPENTER, which is sent free to all his patrons. A specimen copy sent free to any desiring it. A trial will prove the above facts. For abundant references as to responsibility, integrity, &c., see the *Price Current.*

☞ Cash advanced on Consignments of Produce.

SEND FOR

A FREE COPY

OF

PRICES CURRENT,

And all other Particulars,

TO

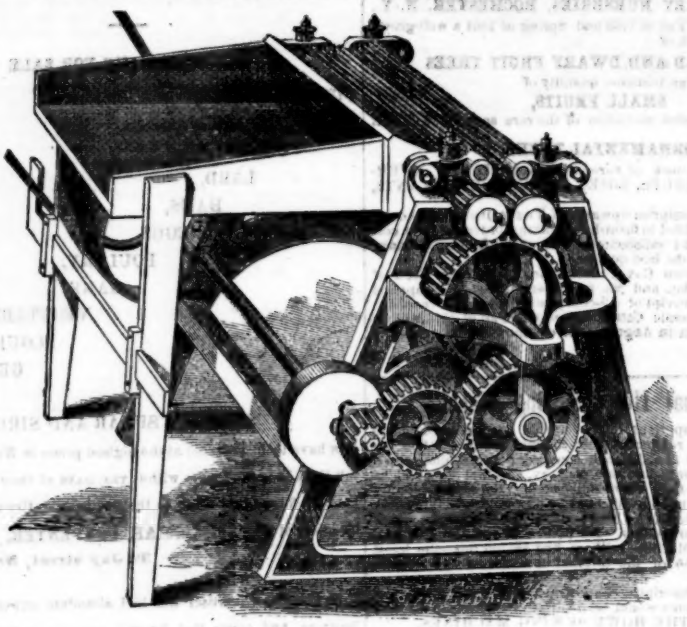
JOSIAH CARPENTER,

jan'63-1y 33 *Jay-street, New York.*

SANFORD & MALLORY'S
.PORTABLE FLAX AND HEMP DRESSER.

Date of Patents, September 16, 1862, and April 28, 1863.

Over Fifty of these Machines have been in practical use during the past season, and so great is the demand for the coming Fall that we have adopted the following plan, viz.: That we will only make to order. Many have already sent in their orders for



Machines to be delivered next Fall. Those who desire to use our Machine in dressing the crop of the present season would do well to send their orders without delay, as all machines are delivered according to date of order.

Made and Sold by

MALLORY & SANFORD,

Harlem Railroad Building, Room No. 26, in White Street, near Center.

Our terms are Cash on delivery of shipper's receipt or bill of lading, and persons ordering can send draft on New York, or Treasury Notes, to some person here whom they know, or by Express, to be delivered to us on our delivery of bill of lading for shipment of Machine. Price at our Factory, at Paterson, New Jersey, for

No. 1 Machine, (capable of dressing 2,500 lbs. of Flax Straw in ten hours,).....$355
No. 2,.....255
No. 3, Hand Machine,.....155

FIRST.—A machine capable of dressing 2,500 pounds of flax straw in ten hours, can be sold at the factory, ready for shipment, at $355; and the second size capable of dressing 1,500 pounds of straw at $255; a third size, capable of dressing from 600 to 800 pounds of straw per day, at $155. The smallest size weighs about 800 pound and can be run by hand.

SECOND.—The yield of flax fiber by the use of this machine, in proportion to the weight of flax straw dressed, EXCEEDS BY AT LEAST ONE-FOURTH that obtained by any other machine or process.

THIRD.—The fiber, dressed by this machine, is much more valuable than that dressed in any other way, on account of the greater yield over the hackle.

FOURTH.—This machine is so simple in its construction and operation, that the liability to derangement is very slight.

FIFTH.—This machine does not require in its use any peculiar skill. It can be operated by boys or girls, and does not involve any risk to the hands or arms of the operatives, while the ordinary machines require the use of skilled labor, and as experience has proved are always attended with risk to the operatives.

SIXTH.—This machine can be driven by any of the horse-powers in use, and as it can be operated by ordinary farm labor, it enables the farmer to dress and prepare for market, at little expense, the flax raised by himself, thus opening to him a new and profitable occupation.

SEVENTH.—This machine is small, the largest size occupying only about four feet square, and weighing not over 1,100 pounds.

As there is a demand for larger machines for hemp, the proprietors are building such, capable of dressing two and a half tons of hemp straw per day.

The amount of flax fiber produced in the United States in the year 1850 was 7,806,809 pounds. Had the straw from which this amount of fiber was taken been dressed by the Sanford & Mallory Machine, the yield would have been not less than 10,469,078 pounds. The increased product of the flax saved, at present prices, would have been worth $650,542.

When it is remembered that in many of the Western States an immense quantity of flax is raised for the seed alone, the straw being destroyed or wasted as of no value, it will readily be seen that the introduction among farmers and manufacturers of a cheap and effective machine, capable of converting what would otherwise go to waste into an article of great value, can not fail to produce the most important results.

It is well known that flax can be successfully cultivated in all the Northern States. If in addition to the value of the seed—sufficient of itself to pay the entire cost of cultivation—the straw can be made a source of large profit, a wide field of successful industry will be opened.

That the statements here put forward as to the efficiency and value of the Sanford & Mallory Machine, and especially as to the great saving effected by it over any other machine or process known, are rather below than beyond the fact, will abundantly appear from reports and letters from practical flax-workers in our possession. Nothing need be added to their direct and positive testimony.

The machine requires two men or boys to tend it, and runs from 1,800 to 2,400 pounds of straw in ten hours.

A dry or wet day makes no difference with this machine, with reference to its result in saving fiber.

The machine can be seen in operation any day at room No. 26, Harlem Railroad Building, corner of White and Center streets, New York City, or at Mr. Harvey Wilcox's Flax Mill in Union Village, Washington county, N. Y.

This machine, with one-house power, will also run from 400 to 600 pounds of hemp stalks per hour, leaving the fiber perfectly clean and straight, with not one ounce of tow to the ton.

Those desiring machines this fall should order at once, as we shall supply according to date of orders.

☞ Descriptive Circulars sent free on application to

MALLORY & SANFORD,
Corner White and Center streets, New York City